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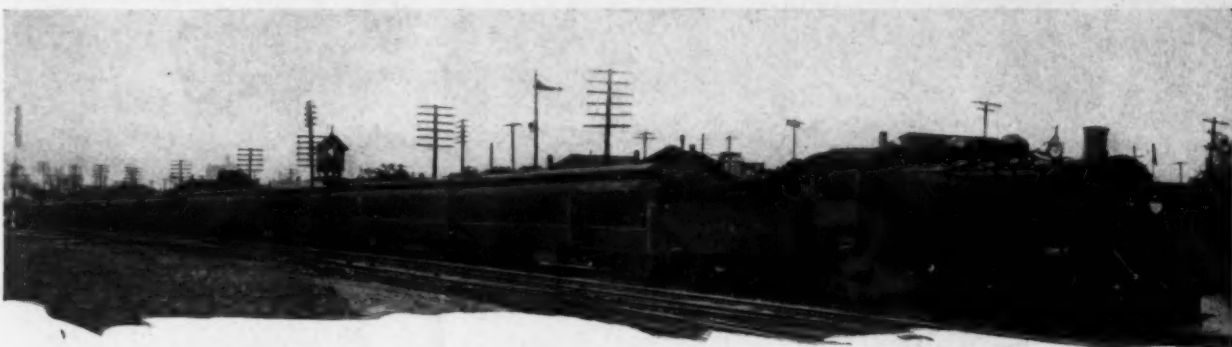
Railway Age

FIRST HALF OF 1924—No. 5

NEW YORK—FEBRUARY 2, 1924—CHICAGO

SIXTY-NINTH YEAR

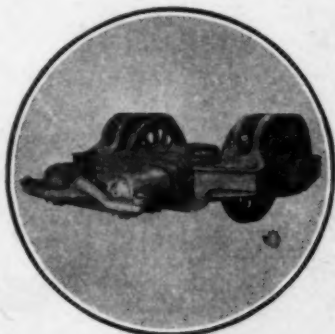
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EDITORIAL

Railway Age

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No. employee injured in 148 days, ending with January 8, is the safety record reported by the safety committees of the

A Silver Cup and Banners

Northern division of the Chicago Great Western, which consists of 490 miles of line and runs locomotives two million miles in a year. This mileage means an average of about five trains each way, daily, over the whole division. On October 7, there was an injury to a trespasser; but from then to January 8—ninety-three days—there was no reportable injury in any class of persons. For a whole year there has been no record of any injury to a passenger or a shop employee, or a fireman or to any individual in any one of a half dozen other classes. The Northern division takes the honors away from the Western, which had gone 130 days without an injury to any employee. The Western division has had no employee killed in 40 months and no passenger injured in two years. The correspondent who sends us this information gives as the first cause of such a fine record the "constant and continuous efforts" of safety-committees and others; but the things mentioned in our title undoubtedly constitute a part of the reason for constancy and enthusiasm. At any rate, the use of visible tokens to give substance to abstract ideas, is found profitable in many lines of endeavor, and the Chicago Great Western people will be justified in thus congratulating themselves on improved safety in a year when many roads have to record statistics showing a change in the opposite direction. The system of competition between divisions and departments, with a silver cup to be competed for, was established on this road in 1921; and the testimony of the officers is that active personal interest on the part of employees generally has been not only aroused but maintained.

A situation which will have to pass before there can be any real understanding and active co-operation between railway

This Is Not Co-operation

managements and railway employees is the constant search by both for loopholes in their contracts whereby they can take advantage of each other. A certain railroad had an agreement with its men calling for the allowance of extra pay for time spent before time called in preparing for their trips, such allowance being payable, however, only in the case that trips ran into overtime. Obviously, if men were not required to report until the time for which they were called, they could not expect this payment, so the management issued an order to this effect, which, however, it later cancelled as having been slightly more costly than the other plan. In restoring the order calling for the men to make preparations for the trip before the time called, the allowance was fixed at fifteen minutes at the lay-over terminal and thirty minutes at the home terminal. The time actually required in preparation for a trip at the lay-over terminal is just as great as at the home terminal, but the management apparently thought that the men at the lay-over terminal, finding their time heavy on their hands, would go ahead with their preparatory work anyway and that the trains would be ready to leave at the time called; the company would thus cut its payments for preparatory time at this terminal in half without slowing

up the service. As a matter of fact, the management may have had some other reason, not quite so mercenary, for this ruling, but no explanation was offered and naturally the men put this construction upon it; the effect of the ruling was to lower the morale. Railway employees stand in the long run to gain as much from co-operation as the management, but these gains are not so immediate or apparent. The railway companies, on the other hand, to the extent that they can secure the willing assistance of their employees, stand to make direct and immediate gains. Consequently, therefore, it might be expected that the managements should take the initiative in working for mutual understanding and confidence. This does not mean that they should truckle to the employees to the extent of allowing them to derive every possible advantage to be obtained under the union contracts. It does, mean, however, that they should be above making frequent changes in operating practices which at best can net only insignificant immediate savings and which may eventually build up ill-will and a determination on the part of the employees similarly to exert every effort to derive all possible advantage under the union agreements.

If railway officers will be candid in their conclusions regarding the problem of securing better section foremen,

One Way to Get Better Section Foremen

they will all give the same answer—better pay. But unfortunately any suggestion to this end is immediately confronted with the magnitude of the expenditure involved. With approximately 50,000 section foremen in the country an advance of only \$5 per month to each man means a total added expenditure of \$3,000,000 per year and this increased outlay is certain to be futile because an advance of only \$5 per month will not correct the conditions. One question which is almost certain to arise from these considerations is, why 50,000 foremen? Cannot this number be reduced in the light of modern developments in maintenance of way work, notably the motor car? One answer to this question is the fact that the plan has already been tried and failed. With the advent of the power section car about 15 years ago a number of roads endeavored to realize an immediate return on their investment by reducing the number of sections with the idea that the saving in the salaries of the section foremen released would go a long way toward paying for the new equipment. No substantial change was made in the wages paid to the foremen who were retained, with the result that supervision of the same caliber was spread over twice the number of men, with highly unsatisfactory results. Following this abortive effort no further developments in this direction have been brought to light until the present time. One of the eastern roads is now preparing plans for an experiment along much the same line, but with one essential difference, namely that the foremen who are to be placed in charge of the enlarged sections will be given salaries sufficiently greater than those paid at present to attract men of a considerably higher caliber than most of those now employed. Because of the higher salary to be paid the foreman, and the need of additional track walkers and perhaps some leading workmen, it may be that the

reduction in the number of sections will result in no saving whatever to the railroads in the form of wages. The important advantage which is to accrue from this project lies in the attracting of men into the service who are of a caliber proportionate to the responsibility imposed on the track foreman, both from the standpoint of safety and the effective and economical utilization of the labor placed at his disposal. Certain savings will also be effected in the reduction in the stocks of tools and equipment, particularly those of limited use. It will also afford opportunity for the greater use of special equipment because of the smaller number of units to be required. But whatever the results of this venture, the details of its progress should receive careful attention from railway officers throughout the country.

A direct, though sometimes overlooked, relation exists between car shortages and inadequate locomotive terminal facilities. It is evident that no more locomotives are available for moving trains than can be inspected at engine terminals, conditioned and returned to service. If a car shortage is due to

inability to move equipment (and this is usually a highly important contributing factor), the cause is primarily the bottling-up action of antiquated engine terminals which have received practically no improvements in recent years in spite of the increasing size, weight and complexity of the modern locomotive. One instance of delayed terminal improvement, which may not be typical but is at least duly authenticated, may be mentioned as follows: At a certain engine terminal a first-class hot water boiler-washing plant was installed in 1907. The plant was out-grown in 1915; in fact its condition was so bad that it was not used at all for eight years. The questions naturally arise, How have locomotive boilers been washed at this terminal since 1915? How much has the lack of hot water boiler washout facilities cost the railroad in the way of increased time for washing boilers and firing up locomotives? How much have maintenance costs been increased by washing hot boilers with cold water and subjecting the boiler sheets to severe expansion and contraction stresses? Undoubtedly in many instances car shortages can be more readily relieved by enlarging the capacity of terminals so as to increase the availability of motive power instead of adding more locomotives and cars which may tend to clog rather than relieve the situation.

The New Train Control Order

FORTY-FIVE additional roads are required to have installations of automatic train control completed over one passenger locomotive division by February 1, 1926, and in addition, 47 of the original 49 roads listed in the first train control order issued by the Interstate Commerce Commission on June 13, 1922, must complete another passenger locomotive division by February 1, 1926. This latest order of the commission, issued on January 14, and published in the *Railway Age* of January 19, page 247, means that 141 passenger locomotive divisions on 94 roads must be equipped with train stops or train control. This order, while not unexpected by the *Railway Age*, was issued at an earlier date than anticipated and it can reasonably be expected that additional orders will be issued from time to time.

To many, this last order came somewhat like a bolt out of the blue sky. It brings up the question between the railroads and the commission, which was raised at the hearings in March and April, 1922, as to whether train control is or is not in the experimental stage and if the commission is justified in issuing a second order of such far reaching

effect. The commission says that train control has passed the experimental stage while the railroad representatives believe it still to be in the process of development. The commission based its orders on ramp type devices; the railroads, in general, have declared against this type in favor of inductive devices. The commission, in-so-far as the ramp type is concerned, had grounds for stating that train control was beyond the experimental stage; but only since its first order have several types of the induction scheme advanced well into the development stage.

Under these conditions the questions arise as to whether the issuance of a second order of such magnitude by the commission was just and reasonable, because (1) all types of devices had not been subjected to trial under different conditions, and (2) of the amount of money which the railroads estimate it will take to make such installations. The feeling naturally exists that train control development would have been advanced just as rapidly had the commission seen fit to require only a few roads to make installations of different devices for comparative purposes, instead of ordering 94 different companies to proceed with this work on a large scale, unless it is the commission's intention practically to force the roads to use the ramp type. There can be no justification for the commission trying in effect to force all roads to use one type as long as there is a wide difference of expert opinion regarding what type finally will prove to be the best.

With reference to the money involved, many railroads feel that the amount required for train control installations could be expended in other ways which would result in greater savings of life and limb. There is also a wide divergence of opinion among railroad men, train control companies and the commission as to how much it will actually cost to make satisfactory installations and this amount naturally will depend not only upon the traffic conditions and the amount of protection desired, but also upon the type of device selected. It is very doubtful if the commission has done anything to advance development of the art of train control by issuing its second order at this time.

An Enjoyable Government Railroad

THE INTRODUCTION of a new feature into the practice of railroading is proposed by Senator Norris of Nebraska, who has introduced in the Senate a bill to create a Federal Transportation Company to acquire and operate a government railroad system with sufficient mileage to "fully regulate passenger and freight traffic within the United States" and, if possible, to connect the Atlantic and Pacific Oceans and likewise the Great Lakes and the Gulf of Mexico, together with "all the necessary additional mileage possible to make the business of said corporation effective in the regulation of rates, and also sufficiently profitable to pay off the indebtedness of all the railroads constructed or acquired and also all of the bonds issued by the Government of the United States" for the purpose.

We are not referring to his proposal of a government railroad as novel; in fact, if memory serves, Senator Norris has introduced government ownership bills several times before. But his proposed corporation, according to the bill, shall not only make and have a corporate seal, but is "hereby authorized and empowered to lay out, locate, construct, furnish, maintain and enjoy, any railroad or railroads," together with all necessary and useful appurtenances. The enjoyment of this railroad is, perhaps, held forth as an additional inducement to the proposed five directors because their salaries, as well as those of any officials or employees, are to be limited

to \$12,000 a year, and also because it is proposed to do away with the reprehensible practice of some railroad companies of paying dividends. Possibly the directors are expected to enjoy their jobs while they may because the bill provides that any one may be removed from office at any time by concurrent resolution of the Senate and House of Representatives.

Former Director General McAdoo, one of the few people in the United States who may probably be said to have thoroughly enjoyed the experience that this government has already had with government railroad operation, might not find the presidency of the proposed new corporation so enjoyable because of the above two limitations. Also, McAdoo had the joys of railroad operation combined with those of the office of the Secretary of the Treasury, whereas under the Norris bill a separate Secretary of the Treasury would have the joy of being authorized and directed to issue $4\frac{1}{2}$ per cent bonds of the United States for the purpose of carrying on the business of the railroad, with a limit of \$5,000,000,000 "unless a greater sum is authorized by the Congress." This offers an opportunity for Congress to share in the general enjoyment, just as some members of Congress had a little fun in 1919 by withholding an appropriation of \$750,000,000 needed by Director General Hines to pay some of the bills incurred by his predecessor the year before.

Another source of joy for the Secretary who is in office 30 years later is provided by directing him, "if at the maturity of any issue of such bonds the corporation does not have the funds to pay them in full" to issue additional bonds upon the same terms, regardless of the money market, for the purpose of refunding.

The entire plan is so enjoyable that while full provision is made in the bill for the use of any surplus income from operation, there is no reference to any way of taking care of possible deficits, unless that is implied in the authorization of bond issues "for the purpose of carrying on the business." Of course, if deficits are to be met by the proceeds of bond issues, the full enjoyment of the railroad may be reserved for posterity, with an advance sample for the benefit of the first Congress to meet after the \$5,000,000,000 limit has been reached.

Railway Wages and Rates

THEORIES AND PRINCIPLES which appear logically unassailable often are assailed by rude facts in an unmannerly way. The *Railway Age* doubtless stated a principle correctly when it said in an editorial in its last issue that the reasonableness of the net return of the railways is not measured by the wages they pay, and the wages they pay are not a measure of the reasonableness of their net return.

Just about the time this editorial was written, however, the New York Central Lines granted an advance of about 5 per cent in the wages of their engineers and firemen which plainly was mainly a result, directly and indirectly, of the unusual prosperity this railway system is now enjoying. Why did Warren S. Stone, grand chief of the Brotherhood of Locomotive Engineers, and D. B. Robertson, president of the Brotherhood of Railway Enginemen and Firemen, first press their demand for an advance in the wages upon the officers of the New York Central? Obviously because, first, the eastern lines have been making recently, compared with the other railways of the country, a relatively large net return, and secondly, because the New York Central system has been making relatively larger net returns than most other eastern lines.

While the labor leaders have repeatedly claimed in public hearings that whether wages should be advanced or not should not be determined by the profits the railways are making, it is notable that when they seek advances in wages

by negotiations with individual systems they begin with those systems that are doing the best financially. Undoubtedly, also, the officers of the New York Central Lines were influenced in their decision by the fact that these railways are doing well, and probably could better afford to grant their engineers and firemen an advance than have a serious controversy with them.

The only other important road, we believe, which had previously made a settlement with any of its train service employees was the Rock Island, which had made an agreement with its locomotive engineers to maintain for another year the wages now in effect. It is a question of much interest and importance what will be done by other railways. An advance of 5 per cent in the wages of all the locomotive engineers and firemen in the country would amount to about \$20,000,000 a year. The conductors and trainmen also are seeking an advance in their wages. An advance of 5 per cent in the wages of all engineers, firemen, conductors and trainmen would amount to about \$50,000,000 a year. The question whether to follow the example set by the New York Central will be approached with widely differing feelings by the officers of different railways. The New England lines are in eastern territory, but most of them are doing poorly, and when their officers consider the question in the light of the net return they are earning they will regard an advance in wages with anything but favor and satisfaction.

The situation with which a large majority of the western lines are confronted is as bad or worse. There are a few railways in western territory that are moderately prosperous, but the western roads as a whole earned only $4\frac{1}{2}$ per cent on their valuation in 1923, and this is the largest return they have earned within the last three years. Furthermore, they are confronted with a strong demand for a reduction of freight rates. Hearings are now being held before the Interstate Commerce Commission regarding a proposed reduction of 10 per cent in the rates upon grain, grain products and hay. This reduction in rates upon grain, grain products and hay would amount to about \$29,000,000 a year for the railways of the country, and to about \$18,000,000 a year for the western lines. The western lines are carrying the burden of resisting this proposed reduction of rates, and are using against it the argument that it would be unreasonable and unjust to reduce freight rates while their taxes and operating costs, especially wages, continue as high as they are now. An advance of 5 per cent in the wages of engineers and firemen alone would cost the western roads about \$8,000,000 a year, while an advance of 5 per cent in the wages of engineers, firemen, conductors and trainmen would cost them about \$20,000,000 a year, or about the same as the reduction in grain rates being sought. Furthermore, the fact cannot safely be ignored that an advance in the wages of employees in train service would tend to cause demands from other classes of employees.

A pertinent circumstance is that the strength of the demand for reductions of freight rates in western territory is largely due to the political activities of the very labor unions that are now seeking advances in wages. The heads of the unions went into western territory and urged railway employees to vote for Senator LaFollette, Senator Brookhart, and all the other radical public men who attacked the managements and rates of the railways in the political campaign in 1922. As a result, these western radicals were elected very largely by the votes of railway employees. Furthermore, the heads of some of these same labor unions are now actively engaged in propaganda and political activities for the purpose of forcing down railway rates. The most conspicuous example is Warren S. Stone, head of the Brotherhood of Locomotive Engineers, who was elected chairman of the finance committee of Senator LaFollette's National Conference on Railroad Valuation which was organized in

Chicago last summer; and the counsel who appeared for this conference on valuation in hearings before the Interstate Commerce Commission was Donald Richberg, general counsel of the railroad brotherhoods.

The question thus presented to the managers of the western roads is whether they shall continue to resist the demands for reduction of rates on the western farmers' grain and grain products, and at the same time grant an advance in the wages of employees whose labor unions have used all the power at their disposal to intensify and make effective the demand for a reduction of the rates from which the wages must be paid. If the western roads, or any of them, voluntarily advance the wages of their train service employees they will, by their own action, greatly weaken their argument against a reduction of rates. They will destroy their ability to tell the western farmers that they are paying present wages because they were fixed by government authority. They will cause thousands of farmers to believe that the railways are "double-crossing" them.

There is another aspect of this situation which should not be overlooked. From every standpoint the employees of western railways are at present relatively much better off than the farmers in the western granger states from whom the railways derive a large part of their revenues. Either an advance in wages or a reduction of rates on farm products would be largely or wholly taken out of the net operating income of the western lines which within the last three years has been so small that the Interstate Commerce Commission itself in a recent decision indicated that these roads are not getting the return to which they are constitutionally entitled.

Thus the western lines are confronted with a very serious dilemma. If they do not voluntarily advance the wages of their train service employees they may have serious labor troubles. If they do voluntarily advance them, they will by so doing indicate they believe that their employees, who are relatively well off already, are entitled to higher wages, while their farmer patrons, who relatively are much worse off, are not entitled to a reduction of rates.

There is no question, in the opinion of the *Railway Age*, as to what attitude in these circumstances the managements of the western lines, at least, should assume. Their attitude should be one of positively refusing to grant any advance in wages unless it has been previously awarded after hearing by the Railroad Labor Board. The labor unions cannot be allowed to eat their cake and have it too. If they will persist in helping create sentiment for reductions of rates by governmental action, they should be forced to go to governmental authorities for their advances in wages. While the present sentiment exists in western territory, it would be almost suicidal for the roads in that territory voluntarily to grant any advance in wages unless they could show it was absolutely essential to enable them to get enough labor to man their trains and maintain their properties.

New Books

Emergency Braking of Electric Cars. By D. D. Ewing.
Bulletin No. 13, Engineering Experiment Station, Purdue University, Lafayette, Ind. 164 pages, 6 in. x 9 in.

This bulletin contains the report of a series of emergency stop tests made with four types of city and interurban electric cars. The investigation was a co-operative one, participated in by Purdue University, the Central Electric Railway Association and the Westinghouse Traction Brake Company. The manner in which the tests were conducted, the results obtained and the conclusions reached are given in detail.

Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

What Is "Educated Strata"?

SPRINGFIELD, Mo.

TO THE EDITOR:

Certainly it is the "educated strata" in railway operation that determines its degree of progress and efficiency. Alonzo Swartz, in his letter published in the *Railway Age* of January 19, appears to confine the term "educated strata" to the product of the cap and gown.

The majority of operating officials who actually determine the degree of progress and efficiency on our transportation systems are thoroughly educated. Not a great proportion, however, are college graduates. Their education has been gained in actual experience conducting transportation.

Seniority is by no means perfect, but it appears to be the best working system of promotion that has as yet been adopted. He who invents a better policy, that will serve its purpose with fairness to employees and employers, will fill a long desired want.

J. R. MOLL.

The Motor Bus As An Adjunct to the Railroad

DETROIT, Michigan.

TO THE EDITOR:

Your issue of the *Railway Age* of December 29, 1923, carried an article entitled "The Motor Bus as an Adjunct to the Railroad" by R. S. Williams, which at first blush seems plausible, logical and moderate in its tone, is well written and otherwise makes generally interesting reading. What I want to express, however, is this, that its place is not properly in a technical magazine such as the *Railway Age*, inasmuch as its acceptance by you gives it a certain authenticity that it does not possess.

Mr. Williams is to be congratulated on the ingenuity of his style, rather than upon his reasoning. He carefully sets up a typical Main Street village with the art of a Sinclair Lewis, even creating such characters as "Dad" Ryan; tells of his own boyhood activities as part of the personnel of the village, and injects what the dramatist or the novelist calls local color, all of which is preparatory to his working up a grand climax. Now, railroad argumentation is primarily a matter of definite economic rules and experience covering a period of over 90 years. You will admit that the expedients of the dramatist or the fiction writer are hardly safe ones to use in a discussion of this kind, unless the purpose is to bedevil an industry.

I said above that Mr. Williams argues ingeniously. Let me illustrate this: For instance, he makes these statements: "Yet the railroad claims that the traffic on this line does not warrant more frequent service and cites figures to show that the present service is not profitable. There is no reason to disbelieve this statement," he very generously allows, and then he very ingeniously throws suspicion on his own admission with these words: "We do not have access to the railroad company's books, but that is what they say, and for the purposes

we have in mind it suits us to accept their statement at par." I refer to this at the outset because this same form of reasoning is used throughout the article. Now, surely, Mr. Williams must know that there is a way to check these figures, if the people interested think that they are being imposed upon. This they can easily have done through the regularly constituted supervising governmental commissions. Their personnel is so constituted that the interests of the people will not be neglected.

While admitting the difficulties of the small town and the hamlet and while accepting the statement of the problems of the commercial traveler who has to cover the territory, and who has to do this more expeditiously in these days of high cost of living, higher hotel rates, higher transportation rates, etc., I believe that too much stress is placed upon the difficulties of one class of people, who after all form a small percentage of the railroad patrons, when measured in terms of aggregate railroad earnings. There are many railroads in the country which operate through just such sections as Mr. Williams describes that would gladly give up passenger service entirely, if this were possible. This they could do without seriously impairing their net earnings. A railroad, by its very nature, is one of the most costly industries that we have. For every dollar that it earns it must have an investment of from three to four times that amount in its plant, i. e., that is its roadbed, equipment, etc. There is hardly another industry where the turn-over is not several times the cost of the plant. This fact is too often lost sight of when the tax gatherer happens along, or the critic starts to carp. This relationship between the investment and the earning power of a railroad consequently eliminates from railroad management the tendency to reckless experimenting, as Mr. Williams would have them doing; and, likewise it also makes railroad officers particularly keen about developing any traffic building possibilities that the section served possesses. About this, there will be more later.

To get down to the remedy which Mr. Williams presents. He offers as his remedy for the correcting of Main Street's problems the utilization of the gasoline motor car. He sets this up as an infallible cure. Now, I submit that this is not necessarily true. I know of a railroad in a territory similar to the one which Mr. Williams has described that has made use of this service for the past 10 years. This railroad is a single track line and it is not over crowded with through traffic to interfere with the schedules of the passenger service it offers. Ten years is surely a long enough period to try out an experiment. Its story is this: Each year, this railroad, as far as passenger service is concerned, is facing a situation of diminishing returns through the extension of the motor service. This condition has been becoming more and more acute until there is a possibility that this particular service will be withdrawn altogether. To be exact the operation for 1915, 1916 and 1917 yielded a net return of from 20 to 30 cents a mile; for 1918 and 1919, 21 to 24 cents a mile; in 1920, 1921 and 1922, 10 cents a mile; in 1923, less than this, the computation not being complete. Business has been gradually falling off. The various reports to the Interstate Commerce Commission and to the utilities commissions of the states through which it runs will, no doubt, establish these facts when the time comes to take action. So, it would seem that the experience of this railroad would be a safer guide than the mere conjectures of the individual railroad men, the trade editor, et al., with whom Mr. Williams has discussed this problem.

The writer of the article then goes on to make five points in his argument about the practicability of his motor car service, as follows:

"First, it would turn a non-paying branch line into a profitable venture for the railroad company.

"Second, it would give passengers, townspeople, farmers

and commercial travelers, a service in and out of town that would be of some practical use.

"Third, it would keep people in small towns better satisfied and this would have a tendency to build up these places with a better class of citizens and business men.

"Fourth, it would bring trade to the larger cities by making it easy for patrons to come into the terminal and get home the same day.

"Fifth, it would discourage the use of the automobile by commercial men."

These facts are not borne out by the railroad I have spoken of above.

In my experience and observation, as a railroad man for upwards of a quarter of a century, I have never yet known of an instance where a railroad has neglected to develop its earning powers. The struggle for existence among railroads has been keen. Their very existence for many years depended upon the extra carload of freight or the extra passenger that they could secure. Every railroad has its traffic officers who are constantly on the alert to build up gross earnings. Is it reasonable to think that if the remedy which Mr. Williams so cock-surely offers had been practicable it would not have been adopted long ago?

Another quotation from Mr. Williams' inspiration: "Individual railroad men have repeatedly expressed themselves as convinced that motor trucks and express cars will be used for handling local and short haul traffic. The difficulty will come in effecting the needful change. Large bodies move slowly and railroads move even slower than that, so it is not to be anticipated that these cars will be seen on the railroad in large numbers immediately. Like every other improvement offered to the railroads, it will be adopted eventually and then the public will wonder how it ever got along without such a convenient and flexible mode of transportation."

Henry Ford, the motor magnate and the greatest mechanical genius of the age, is the owner and operator of about 455 miles of railroad that would seem to meet the conditions referred to. Mr. Ford and his organization have never been accused of neglecting to take up the pursuit of the elusive dollar when once they have felt that it has left its lair. They have even been known to ferret it out when their competitors thought it could not be scared out. Does it seem reasonable, therefore, that Mr. Ford with all his genius for advertising, for mechanics and for turning everything that he touches into gold, would not have tried this out long ago? Would he not have taken this opportunity of making railroad history, if the plan had had possibilities as promising as outlined?

Mr. Williams, in another section of his article, makes a serious criticism of the Chicago, Burlington & Quincy for making eight stops of a heavy train on a 102-mile run. The officers of this company, no doubt, can give him very good reasons for doing this. Then, he tells of another railroad, unnamed, which stops a heavy Pullman train for an occasional 11 cent passenger. I will venture in this instance that this is due to conditions over which the operating officers have no control. We had just such a case on the Pere Marquette recently. There is a certain particular town on one of our most important main lines which has a population of 547 souls, when the mayor and the other city fathers are all at home. We gave that point a service of four trains in each direction. We operate five trains each way on this division. We felt that this service was sufficient. The city fathers went before the Michigan Utilities Commission and secured an order to stop one additional train each way, which happens to be one of our heaviest trains. This is going on constantly. We had no alternative in the matter—did not want to extend the service because we knew from experience that it would not be profitable, yet we had no recourse but to obey the order.

In summing up, I may say that the motor bus service is an adjunct only to the extent that it brings traffic from across

country. When it parallels the railroad, as it generally does, it is a real and injurious competitor. Contrary to Mr. Williams' positive statement which he makes among five points outlined above, we find that the railroad service does not discourage the use of the automobile by commercial men, except during the cold or rainy season.

I need not mention the costly experience in the construction of all-steel passenger cars, when wooden cars with steel underframes would have served the same purposes, although public clamor asked for the other. Just now certain railroads have been asked to install automatic train control. The order is peremptory, but so far nothing positive has been offered. I have no doubt, that eventually this will be worked out, and the credit for this will go not to the persons who worked it out, but to the commission that ordered it. Railroads are constantly spending money on experiments of this kind to meet a public clamor. This tendency, together with the heavy natural wear and tear makes for higher costs of transportation. These conditions are peculiar to railroad operation.

It is not the purpose of this article to refute every statement—and each one can be refuted—but only to show that Mr. Williams has erected his structure on a weak foundation.

FRANK H. ALFRED,

President and General Manager, Pere Marquette Railway Company.

The Unjust and Unjustifiable Flat Wage Scale

MID-WEST.

TO THE EDITOR:

The writer has been moved to write this letter not so much from self interest as by the oft-repeated remarks, such as expressed in the caption, and, more so, because the remarks come from widely divergent interests. Being one of the rank-and-file, the writer knows the feelings of the men of uncommon ability and of skill which they have not attained without the expenditure of a great deal of effort and, in many cases, considerable money—saying nothing about foregoing a lot of the pleasures and comforts of life, which the average man never thinks of foregoing. How then, dare the mediocre look forward to coming in on an equal basis with such experts? To bring this point out more forcibly, let us take one or two concrete cases.

Consider a machinist, for instance, who has learned his trade in a railroad shop and then has ventured out into the country to make a real journeyman of himself. He was successful in getting employment in various manufacturing concerns and other industries employing mechanics. In that way he attained a high degree of skill and an exceptionally wide range of experience. While still young he returned to a railroad shop. Being one of those fellows who always seek knowledge, and more knowledge, he also turned to books and magazines pertaining to his trade. The foreman found that no matter where he put this man he was not stalled; besides he always had a good suggestion to offer. What is more, he never had to do his work over again. This not only on locomotive work, but on any other kinds of machinists' work. Many other mechanics work alongside this one. They vary in a slight degree in their mechanical ability, but none of them can be trusted with anything more than the ordinary work—some only on specialized work. Ask the foreman what he thinks of this man compared to the others. He will tell you that if he was footing the bill he would hire men only of this type, so far as possible, even though he had to pay them twice the current rate of pay, in preference to paying the other type a helper's rate.

Just one more case—this time in the electrical department. There is one electrician who has developed himself

to such a degree that he can be called in any emergency. He can correct or repair any trouble on alternating or direct current machinery, line work, train lighting, locomotive lighting, electric welding, as well as do actual welding. Not only that, but he is also a technical man. He can design and lay out electric drives, lighting systems and power houses; in fact, anything that pertains to electrical engineering work. The other men can only do one thing—electric headlight work. Which one of these men would you rather have? The first man, of course. Then why not give him more pay. He is saving you hundreds of dollars by being able to do a great variety of work, especially in a plant which is not big enough for specializing the work.

We all will admit that the flat wage scale is unjust, and I say it is also unjustifiable. Why will not some one venture to propose a remedy? Because no one wants to put himself out that much, thinking that it is only a small minority who would be benefited anyway. Better let well enough alone. If he goes to stirring up this matter there might be a whole army on his heels claiming the higher differential, and when a precedent was once established there would be no end to it. Why fear this? There seems to be an ingrown skepticism in a great many railway officials that makes them shrink every time anything pertaining to organized labor is brought up. They seem to fear it. It seems they imagine there is something mysteriously skittish about it. In this lies the whole reason why a step rate is not adopted. If this problem were faced bravely and with an open mind there is no reason why justice should not rule. The employer has a perfect right to pay any wages he desires to his men, and there is nothing that can take this right away from him.

The idea of a flat wage scale is fundamentally wrong; furthermore, it was never intended to be so in the conferences between labor and the railroads. Labor bargains for a minimum wage, one that will provide the legitimate necessities of life for the families. This minimum is based on the standard of living labor is accustomed to. It is not a measure of remuneration for all men, even of the same craft. Proportional justice requires that individuals endowed or acquired through self effort with different powers should possess rights that vary in degree. For example, the individual possessing greater capacity either in the form of skill or wide range of knowledge has a right to claim a better standard of living, which, consequently, requires greater remuneration.

The labor question is not settled yet because there is only one principle that is recognized in the agreements between labor and the employer—the moral, or minimum wage. The ethical and economic viewpoints have, so far, not been recognized, and until they are, organized labor will continue to be in a state of dissension and the railroads in a state of inefficiency. Organized labor is more to blame for this than the railroads, mostly on account of petty jealousies on the part of the individual workers. The railroad officials have in many instances recognized a man of superior ability by raising his wages, but his co-workers, through their business agent, have pestered the officials until the man's wages have had to be reduced to a level with theirs. Labor must become broader minded before the general public will recognize labor organizations as a necessary element in the social structure of this nation. Is there someone big enough to rise to the opportunity and bring about the equilibrium so sorely needed?

V. T. K.

THE CHICAGO & NORTH WESTERN has filed suit in the Circuit Court at Madison, Wis., to set aside the order of the Wisconsin Railroad Commission relating to the placing of curtains on the cabs of locomotives. It is alleged that the law passed by the Wisconsin legislature last year, authorizing the commission to issue such an order, is unconstitutional.



Stations with House Tracks Were Selected for Zone Stations

Utilizing the Motor Truck in Freight Traffic

Pennsylvania Installs Co-ordinated Service at Three Points
English Store Door Delivery Practice Described

ONE OF THE INTERESTING DEVELOPMENTS in the movement of l.c.l. freight is the recent installation of a motorized freight service by the Pennsylvania to perform the work formerly done by peddler trains. This practice is being utilized at three locations, namely, Philadelphia, Pa., to Wilmington, Del.; Philadelphia to Downingtown, and

this plan and its bearing upon future developments along the line of coordinating motor truck transportation with railroad steam operation, was discussed by R. S. Hurd, special agent, Pennsylvania System, Philadelphia, Pa., before the New York Railroad Club on January 18. At the same meeting, F. C. Horner, General Motors Corporation, New York, presented a paper on English store door delivery practice and the way in which this has prevented terminal congestion. The various methods were also illustrated by moving pictures and slides. Abstracts of these two papers are as follows:



A Close-Up of a Small Freight Station Now Served by Motor Trucks

Pittsburgh, Pa., to Beaver Falls, distances of approximately 26 miles, 27 miles and 36 miles, respectively. In performing this service, the motor units, although owned and operated by other than the railroad company, are under the direction of the railroad traffic officers who are thus able to work them to the best advantage in conjunction with the stops to be made and the freight to be picked up or delivered. In general, there are two trucks at each installation which perform a pick-up and delivery service only between stations. There has been no change in the existing tariffs, the compensation of the motor truck company being on an agreed basis.

A number of the factors entering into the development of

Pennsylvania Installs 204 Miles of Motor Truck Service During 1923

By R. S. Hurd

Special Agent, Pennsylvania System, Philadelphia, Pa.

The work in which the Pennsylvania is engaged is perhaps more radical than anything that has been undertaken in railroad operation in recent years, and in developing the co-ordination of motor transportation with steam railroad operation in the handling of persons and property, there has been absolutely no precedent upon which to base, or with which to analyze, the undertaking.

The idea of co-ordination of motor truck and bus transportation with rail service in the handling of persons and property was developed by R. C. Wright, general traffic manager of the Pennsylvania, and it was through his efforts, after many years of study, that a department was established for the purpose of working out motor truck problems on the Pennsylvania.

In 1922 not one mile of motor truck service had been installed to replace steam railroad service in the handling of less-than-carload freight. In 1923, 204 miles of truck service were placed in operation on the Pennsylvania System in the handling of freight from station to station. For several months the problem seemed almost insurmountable, because practically no overhead charge could be made for the locomotive in such service, for the reason that its cost had been re-

duced to repairs and actual operating costs. Therefore, it was simply a question of operating expense of the steam service against the operating expense of the motor truck service. It did not take long to show that steam service is the cheaper when the volume of tonnage exceeds one truck load, or when the mileage exceeds the possible round trip mileage of the motor truck.

The unit plan of procedure will admit of the installation of motor trucks where needed, and where profit in the operation can be shown without excessive investment and without too greatly interrupting or disorganizing the present rail operation. Plan No. 1 embraces the displacement of package local freight trains, and the installation of motor trucks for this service. For example, we take a part of a division where two package locals are now in operation. We make a turnaround with one train and remove the other train, since 30 miles is approximately the maximum mileage that can be served in one day with a motor truck. That installation is given a unit number, and we proceed to develop other divisions or sub-divisions in a like manner.

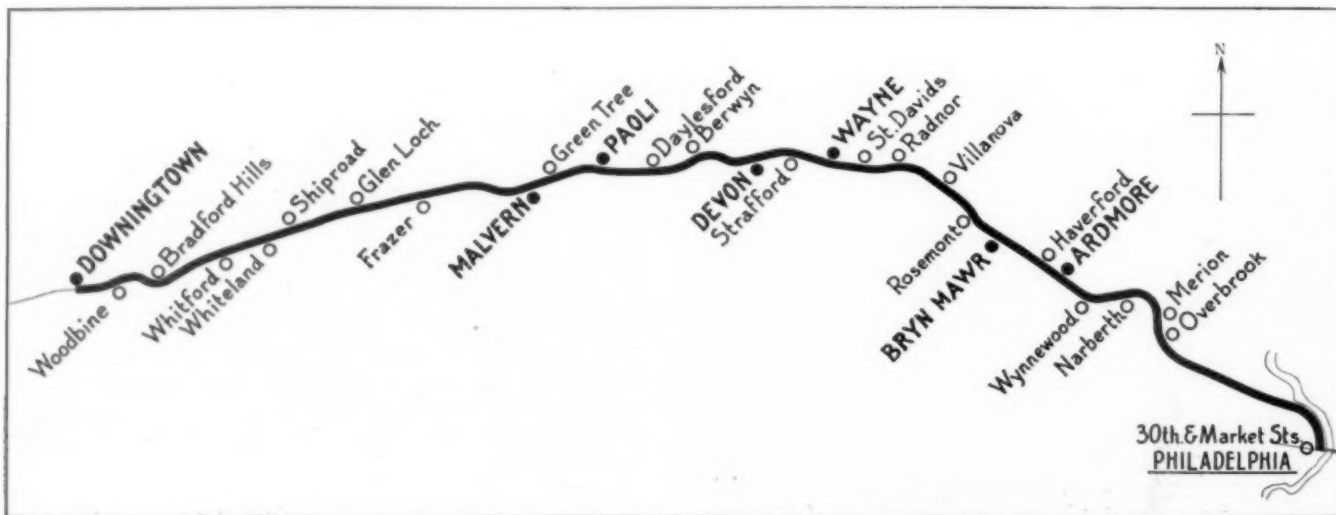
The railroad has been doing a great deal of trucking by rail. That is, it has been moving freight at low speed with

motor truck service did not show a saving there was no economy in making the installation.

We overcame this difficulty and took care of peak loads by establishing "zone" stations. For example—on our main line installation west of Philadelphia, the "zone" stations westbound are, Ardmore, Wayne, Paoli and Downingtown. Zone stations eastbound are Downingtown, Malvern, Devon and Bryn Mawr. Full cars are carded to the zone stations, and the intermediate stations between zone stations are served by motor trucks. The full cars can be moved along with the other "destination" cars by the pick-up-and-drop train, instead of the peddler local or package local, and by the establishment of "zone" stations it is not necessary to make a cross-over resulting in a minimum of time being consumed in dropping a car.

Figures as to the saving realized in this operation are being compiled, but we are not as yet in a position to give them for publication. We are, however, sufficiently encouraged to proceed with the work, and are constantly studying conditions on other divisions where motor truck service may be installed.

The Pennsylvania does not ask any truck operator to



The Station Arrangement West of Philadelphia—Zone Stations Are Shown in Heavy Letters

many stops and with long waits for handling. Wherever the road is doing this work by steam service, it is doing what should be done by the motor truck.

In former years there was a reason for doing this because the highways did not then admit of 40 to 50 miles of highway travel per day with one vehicle. But today, with improved highways, and with the motor truck developed to its present standard of efficiency, a 5-ton truck can travel from 50 to 60 miles per day, make from 20 to 30 stops, and handle from 20,000 to 25,000 lb. of freight.

When we take a part of a railroad division where there are from 15 to 25 stations within a distance of 20 to 30 miles, we have a steam operation that is especially expensive, together with the difficulties of handling less-than-carload freight to and from stations on a four-track railroad where heavy suburban travel is prevalent.

It is well understood that freight stations cannot be on both sides of the track to accommodate traffic in both directions, and, therefore, it is often necessary, during the hours of heavy suburban travel to cross-over, this often requires from one to two hours to accomplish.

When first confronted with the volume of tonnage to be handled within any division where the motor truck service seemed to be required, accomplishment looked practically impossible, because in the first place it was intended to retire steam service and install motor truck service, and if the

undertake a trucking operation that does not seem to be entirely practical from every standpoint. We hire trucks, paying a rental for such service. Any capital outlay must, of course, be made by the truck operator. We assume that the rental and operating charges we are paying yield a profit to the operator; but in no case is our company interested in the development of any trucking project to the extent of investing capital in such enterprise. I am very glad to say, however, that those interested in the automotive industry seem not only willing, but prefer to operate their equipment and make their own investment, provided they can make a contract with the railroad that shows a possibility of profit.

The automotive industry has, in my opinion, an obligation, which I find the principal manufacturers are ready and willing to recognize. Motor trucks have, in an unorganized manner, taken both long and short haul business from the railroad, and in no case has the railroad been relieved of the necessity of operating present steam service. There are many trains being operated today, where the daily loss runs from \$50 to \$75. Before the advent of motor truck competition those same trains earned a profit of from \$50 to \$75 per day, and occasionally for a few weeks of the year these trains are now worked to capacity when the motor truck operator finds it difficult to operate his trucks over the highway on account of snow, detours or some other condition. We cannot discontinue service whenever we find the operation

burdensome or unprofitable as the motor truck operator does, but must keep the trains running on schedule, regardless of the loss sustained. This seems to be a point that is not realized by the motor truck industry as a whole, but when this is better understood, I think the automotive industry will show a greater willingness to aid in the proper co-ordination of motor truck and rail service.

Pennsylvania Has Developed Three General Plans

Regarding the handling of less-than-carload freight: We have divided our efforts into three separate and distinct plans, each of which may be operated independently by different firms or individuals, and yet co-ordinate into one complete working machine in its final result.

Plan 1 covers the handling of less-than-carload freight by motor truck instead of by package local or peddler train, the motor trucks serving intermediate stations between zone stations, zone stations being served by "destination" cars.

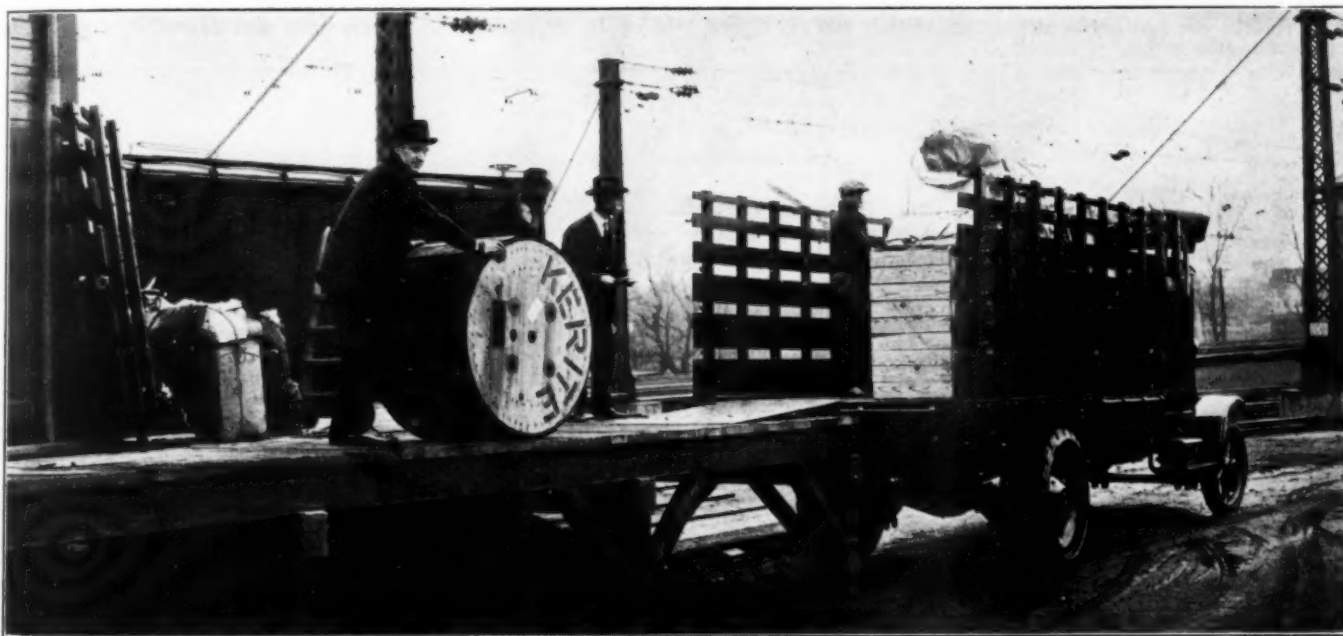
Under Plan 2, which is entirely separate and distinct from Plan 1, we are studying the terminal situation in the larger

door-to-door delivery to and from break-bulk points, the number of trucks operated under Plan 2 will be reduced accordingly.

As the door-to-door pick-up and delivery increases in tonnage, the truck operations in intra-terminal transfer will decrease in exact proportion thereto, and as these operations develop we expect in the final analysis that all trucks operating under Plan 2 in intra-terminal transfer service will be operating between break-bulk points and trader's door, furnishing door-to-door pick-up and delivery under Plan 3.

The principal reason for adopting Plan 2 at this time is that under present methods in steam operation, we can name no reduction in operating costs in intra-city car movement until all of the tonnage is disposed of, but by setting up the truck operation we can realize our saving in exact proportion to the absorption of this traffic by the Plan 3 operation engaged in the establishment of door-to-door pick-up and delivery.

The results obtained with the operating units already installed and the possibility of development of motor truck



One of the Motor Units Loading Freight at Paoli, Pa., a Zone Station

cities, where at the present time we have a very heavy trap or ferry car operation between the transfer and the city stations. It is considered advisable at the larger terminals to establish one or more break-bulk points outside the congested area, and transfer the freight by motor trucks between such break-bulk points and city stations inbound and outbound, thus doing away with this particular phase of the trap or ferry car movement by steam operations.

When this truck operation is established, we can begin on Plan 3 which contemplates a progressive method of door-to-door, pick-up and delivery to and from break-bulk points. It is well understood that door-to-door, pick-up and delivery cannot be installed at all points and operated upon a 100 per cent basis until the public demand for that service becomes nearly unanimous.

In the meantime we can, however, supply this service, even though it is a duplication of present station service. While we are developing our door-to-door pick-up and delivery, our operation under Plan 2 will be reduced in exact proportion to the development of door-to-door operation. For example, if we use 50 trucks to transport the freight to and from city stations and the door-to-door pick-up and delivery operator, under Plan 3, requires 10 of those trucks to handle

service in co-ordination with rail movement of less-than-carload freight convince us, as we continue our studies and investigations as to its possibilities, that we are on the "right track," and that extensions of the motor truck service as outlined will solve some of the problems, which confront us in the handling of less-than-carload freight, in a way which will result beneficially both to the shipper and the rail carrier.

English Store Door Delivery Practice

By F. C. Horner

General Motors Corporation, New York.

The term store door delivery is used in this country when referring to an organized method of carting that class of freight that must move over the road before and after the rail haul is completed. The English cover the subject by calling it "the cartage of miscellaneous goods traffic," miscellaneous goods meaning l.c.l. freight. English railways have furnished cartage service to their patrons, the traders, ever since the railways began operation. At first, several large road transport companies performed most of the cartage service

under contract with the railways. English freight traffic is divided into eight classes, i.e., A, B, C, 1, 2, 3, 4 and 5. The rate for these classes graduates upwards from Class A. The commodities that come within Classes A, B and C are charged at a station-to-station rate and include heavy traffic, such as coal, iron, cement, etc., which is carted by the consignor and consignee respectively. The remaining classes are charged at what is known as collection and delivery rate.

The cartage service furnished by the English railways, up to the time I left England in October, 1922, was conducted in two ways. The Northern roads, so called, used the "C. & D." plan under which the rates included the collection at store door at point of origin and the delivery to store door at point of destination. If, in this case, the consignor elected to cart the traffic from store door to railway terminal, he would apply for a rebate to pay him for performing the cartage service the railway did not render.

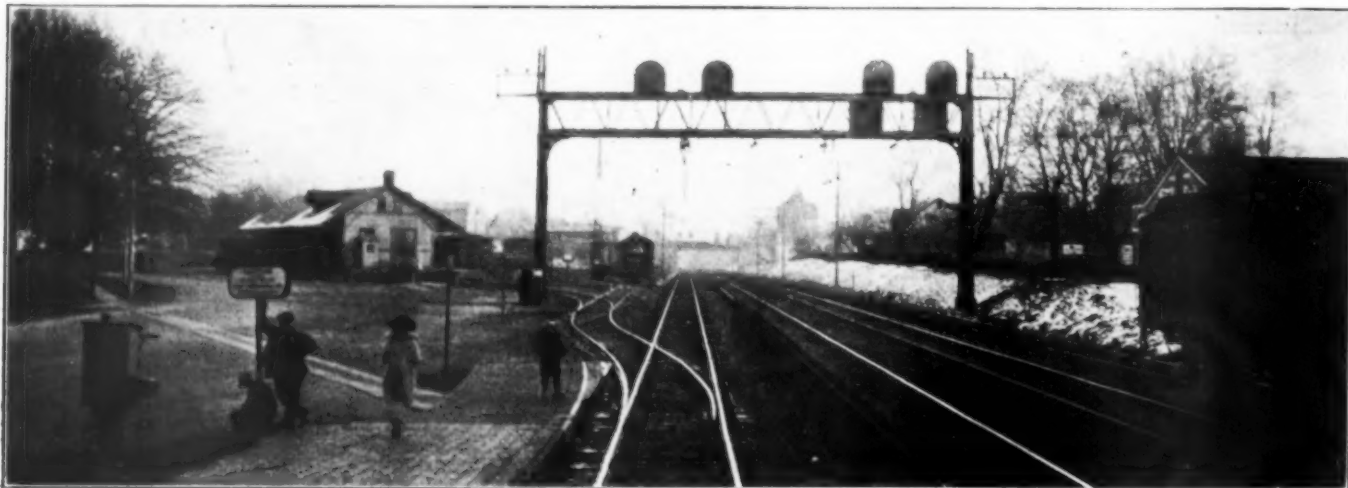
The Southern roads, on the other hand, used the station-to-station system of rates principally and showed the cartage charge as a separate item. If the railway carted this traffic at either end there would then be an additional charge to the trader for the cartage performed. But should the consignor

invoice and is practically an exact copy of the entries on the invoice. The single entry delivery sheet is very generally used by all English railways now, and, as the name signifies, deals with one consignment only. This document eventually becomes the railway company's receipt for the freight, and is the "Bible" of the driver as his delivery sheets cover all the freight on his dray. Each sheet is charged to him when he leaves the station, and must be accounted for before he checks off at night.

We can consider that the dray is loaded and ready for the driver. The driver must first get his delivery sheets, and from them find out the number of his dray. (Drivers usually have the same horse or horses every day and the same motor truck, but may have any one of several hundred drays). As soon as he obtains his delivery sheets from the cartage office, and after presenting his gate pass to the policeman at the gate, he is off to his district to "deliver the goods."

Question of Delivery Districts Important

The subject of districts is too big for me to attempt to deal with properly at this time. It should be explained, however, that there can be no hard and fast rule as to size



One of the Westbound Zone Stations Between Philadelphia and Downingtown

and consignee both perform their own cartage for the shipment, then this case would be practically the same as the system in the United States.

Delivery Methods Are Well Organized

The delivery of freight begins at the time the car door is opened, and ends at the time the cartage vehicle leaves the trader's store door. The major steps between these two points are best divided as follows: (1) Unloading and checking of freight from cars to platforms or drays; (2) hand trucking of freight to dray loading sections or to warehouse; (3) loading and checking of freight on cartage vehicles in district and street order, and (4) loaded vehicles removed from sheds, and either parked or removed by the drivers, accompanied by a pass, over scales and out into the town for delivery.

The first step is controlled by the checker and his guide is the invoice of the contents of the car. When this invoice reaches the checker at the car door, it contains the following information pertaining to the cartage side of each consignment: (A) Whether traffic is "Delivered" or "Wait Order"; (B) name of street; (C) the postal area, including area number; (D) locality, and (E) district number of mark. The checker furnished with the invoices duly marked, instructs the hand trucker to what point he is to take the packages, whether to delivered berth or to wait order berth.

The dray loader has a "Delivery Sheet" for each consignment of freight. The delivery sheet, is made out from the

and shape of districts. Thus, where the traffic is ordinarily sufficient for one vehicle per day only, a district driver will take quite a large radius, while on the other hand where there are many firms in close proximity to one another, several districts may be comprised within a small compass. This means that exhaustive tests will be necessary to determine the most suitable divisions, and here is where the English postal area map is so valuable in laying out the districts. In most cases the districts are based on collection stops and the driver is given a load of deliveries into his particular collection district.

The driver makes his deliveries in the order in which he can save the most time, and travel the shortest distance, but all the time bearing in mind his collections to be made that day. He usually finishes one or more loads of deliveries by 12 o'clock, so that after lunch he starts on his regular collection rounds.

Collection Methods Practically the Reverse of Delivery

The collection of the freight from the consignor's door can be divided into four operations, and are practically just the reverse of the delivery procedure, namely:

(1) Traffic carted into station accompanied by "consignment notes"; (2) dray loads backed to shed platforms or cars; (3) unloading of van loads and weighing of consignments, and (4) trucking of freight to car side.

Each district driver has a list of the regular stops in his

district, some daily, some every other day, etc., and in addition may have several special calls to make within his district. Special or extra deliveries and collections are usually taken care of by unattached or odd drivers. Here is where the "cartage controller" comes into the picture. This controller or his department is informed at regular intervals by telephone of the movement of all vehicles sent out by all stations, main and subsidiary, and the control office is thus able to send help, by transferring vehicles from one district where there is a surplus to another where the traffic requires extra equipment. One hundred per cent load efficiency is the constant aim.

As soon as the district driver finishes a load of collected traffic, he returns to his home station. When he enters the station his dray is weighed and he is given a ticket on which the weight of his dray and its load are shown separately. The next stop is at the "scrutiner's" box where the consignment notes are quickly examined, and from them the scrutiner knows where to send that particular load, so that the dray will be berthed close to the car into which the bulk of the freight must be loaded, and so make the trucker's trip as short as possible. The driver then backs his dray into



A Typical Station with Small Freight House on One Side of the Tracks

the berth indicated—the berth number is marked on the top sheet of the consignment notes—and turns his weight ticket and consignment notes over to the shed foreman.

The single entry consignment note is the best. One is handed to the railway company with each consignment tendered for forwarding by rail, and should accompany the goods from the dray to the car. Immediately after the goods are checked and loaded, the consignment note is passed to the invoicing office.

At each unloading berth, a staff is stationed, usually two, sometimes three gangs, each gang consisting of a checker and caller-off, or unloader, with two or three hand truckers. The packages are placed on a hand-truck by the unloader and the trucker is instructed where to take the goods. He is also given the consignment note relating to those goods. At the car the loading staff takes the consignment note from him, stows the freight in the car and inserts on the consignment note the number of the car in which it is loaded.

English System Prevents Terminal Congestion

Let us see how this English system prevents terminal congestion? In the first place it is complete transportation, in other words the rail and road movements are synchronized so well that congestion at rail terminals is the exception and not the rule as is the case in this country. In one freight station in London, 1,600 tons of l.c.l. freight is passed over the platforms daily, 800 tons inbound and 800 tons out-

bound, 80 per cent of which is carted in railway company owned vehicles. This station is not an up-to-date one, the roadways and platforms were not laid out to handle such a volume of traffic, and it is only because the operations are carried on in an organized, comprehensive manner that it is possible to move this heavy tonnage expeditiously and to the satisfaction of the traders. And it will interest you to know that at this particular goods station, due to the physical layout of the roadways and other causes, practically all of the traffic is carted by horse-drawn vehicles.

Taking the Midland Railway London Goods Stations, St. Pancras (inbound) and Somers Town (outbound) as the best standard of cartage operations we find that 90 per cent of the l.c.l. traffic is delivered on the same day of arrival in London. Is there any wonder that the traders in England support this railway cartage service? There are in my opinion three good reasons why we should profit by what English railroad men and merchants have demonstrated conclusively to be a practical system for the collection and delivery of l.c.l. freight:

First, because with the English system it is possible to obtain a free movement of traffic through existing terminals as they stand today, which would keep platforms clear from accumulations of freight, and thus abolish, or at least greatly reduce, terminal congestion.

Second, the service rendered the trader would be so superior to that which he now receives that stocks could be kept lower and capital now tied up in large inventories could be used to advantage in expansion of business and for other more productive purposes.

Third, we could, under an organized cartage arrangement, obtain a higher load efficiency on our road vehicles through scientific loading and routing and scheduling methods, with the result that traffic congestion on the streets would be greatly reduced inasmuch as one vehicle would haul the freight that now requires three or more.

That the English are accomplishing these things through their organized system of collection and delivery of l.c.l. freight is conclusively demonstrated when we consider that:

All but 10 per cent of their miscellaneous goods traffic is delivered to the store door on the same day that it arrives at the terminal.

The railway companies' cartage vehicles collect and deliver 80 per cent of the miscellaneous goods traffic passing through their terminals and the bulk of the inbound traffic is delivered at store door by 12 o'clock daily.

It is common practice to give 24-hr. service on this class of traffic up to 200 miles distant.

The English railway cartage vehicles average 60 per cent load efficiency in spite of the fact that returned empties are included in the tonnage moved per dray per day. If empties were left out, the load efficiency figure obtained would probably average between 70 and 75 per cent.



Keystone

Near Paris During Recent Flood of the Seine

Proposed Railroad Legislation

WASHINGTON, D. C.

AMONG THE NUMEROUS other investigations on which the Senate is now engaged, Senator LaFollette wants an investigation of the Railroad Administration. He introduced a resolution in the Senate on January 28, S. Res. 135, which would authorize and direct the committee on interstate commerce, either as a whole or by sub-committee, "to investigate the settlement of all claims arising out of federal control of railroads and to report its findings and recommendations to the Senate."

The Senate committee met on Monday and appointed sub-committees to consider various bills that have been referred to it, while the entire committee is to give consideration to the bills to amend Section 15-a and to the statistics which have been obtained from the Interstate Commerce Commission on the results obtained since the passage of the Transportation Act and also as to the effect on revenues of various percentages of reduction in rates. Senator LaFollette was not ready to press his resolution for a reduction in rates on agricultural products and Senator Gooding has not yet reported his resolution for an investigation of railroad publicity activities on which the committee voted to report favorably with some minor amendments. The hearing set for February 4 on the Gooding bill to amend the fourth section has been postponed to February 18. The sub-committees were appointed for a bill introduced by Senator Robinson to amend the safety appliance laws, one by Senator Dill on State jurisdiction over applications for authority to construct railroads, Senator Cummins' bill to extend the time within which shippers may file claims for overcharges and Senator Trammell's resolution for a reduction in rates on citrus fruits.

In spite of the fact that so many railroad bills have been introduced at this session of Congress there have been comparatively few speeches on the subject. Senator Capper made a speech on January 24 urging reductions in rates on agricultural products and the repeal of Section 15-a but it was rather a milder speech than some he made last session. He said that before the war rates were made on commodities or groups of commodities with regard to their value but that now they are made on a percentage basis and that "rates are arbitrarily fixed by the commission to bring a return of 5¾ per cent on the reproduction value of every transportation line," although he had previously cited the figures which show that the rates have not brought that return. "That is why," he said, "the public often regards Section 15-a as a guarantee to the railroads, although it does not as a matter of fact directly guarantee anything to the carriers."

"We are demanding the repeal of this Section 15-a because rates are determined with regard to the ability of badly organized or located or capitalized or managed roads to earn a profit on an investment the proper calculation of which is in dispute, thereby establishing rates that earn excessive profits on well organized systems. Roads which should not have been built and others which always have lost money for their owners are given a value two or three times their actual worth. No account is taken of improvidence of investment. Roads which are grossly mismanaged are put on the same basis as the efficiently managed property. The strong carriers make the necessities of the weak carriers the justification for taking more from the public than the public should be compelled to pay."

"The recapture provision of Section 15-a is a farce. It encourages extravagance and padded expense accounts by the prosperous roads. While the big railway systems are enjoying prosperity it is doubtful whether the government will make much headway collecting the excess earnings over 6 per cent, one-half of which it is stipulated in the transportation act shall go into a fund for lame-duck roads."

"Mr. President, the repeal of Section 15-a as proposed in my bill, S. 91, will leave the Interstate Commerce Commission free to exercise its power according to its judgment, to adjust and prescribe rates as the circumstances may seem to the commission to justify, and at the same time conform to the fundamental principles of the law that rates shall be just and reasonable. That means, of course, just and reasonable rates not merely for the railroads but for the shippers and the public, giving proper weight to every fact and circumstance which according to the judgment of the commission should affect both private and public interests. That always has been the fundamental principle of the regulation of rates provided for by the act to regulate commerce and similar acts passed by the legislatures of the various states and contained in the constitution of many states."

"Mr. President, since the basis for adjustment of rates is net railway operating income it necessarily includes the rates and revenue prescribed by state authority in intrastate traffic, and thus, as the law stands, the states have no authority except what the Interstate Commerce Commission shall see fit to permit them to exercise. Paragraphs 3 and 4 of Section 13 of this act, providing for procedure in cases involving controversies pertaining to state rates, are therefore repealed by the bill, but the provisions of paragraph 4 of Section 13, providing for co-operation between the Interstate Commerce Commission and the authorities of the states having control of rate regulations, is re-enacted by Section 3 of this bill, in such way, however, as to preserve the rights of the states except where it is found that there is a specific unjust discrimination arising from the state rates. In that event no attempt is made to deprive the Interstate Commerce Commission of power to prevent such a discrimination."

"The right of the railroads to prevent the commissions, either state or interstate, from prescribing rates which would be noncompensatory or so unjust or unreasonable as to be confiscatory within the established precedents of the Supreme Court of the United States in the great body of the law is left entirely unaffected by this bill. The railroads have the same protection precisely as they have always had under the Constitution both of the United States and of the states, which have always afforded ample protection."

A general suggestion that railroads, among others, do everything possible to assist the farmers in the northwestern district was included by President Coolidge in a special message to Congress on the condition of the wheat farmers on January 23. He said: "It appears to me that it is essential that the large business concerns, such as transportation, the more stable banks, not only in this territory but in adjoining states, who necessarily benefit from the prosperity of these areas, should in their own interest extend a very large measure of aid in remedy of this situation and that creditors even farther afield, such as our insurance companies and others, should co-operate fully."

A conference for the purpose of discussing the situation has been called to be held on February 4 in Washington which will be attended by business men and representatives of the northwestern farmers, Secretary Wallace of the Department of Agriculture, Secretary Hoover of the Department of Commerce, and others.

Representative Newton of Minnesota has introduced a bill, H. R. 6058, to amend the interstate commerce act by providing statutes of limitation on actions at law by carriers for the recovery of damages and providing for an extension of time within which such actions may be filed upon existing claims.

Representative Wolff has introduced a bill, H. R. 6074, to meet the situation caused by the nullification of the Interstate Commerce Commission's mileage book order by the courts, directing the commission to order one thousand and two thousand mile mileage books to be sold at a reduction of 20 per cent under the regular passenger fares.

The Proposed Operating Expense Classification

Bureau of Accounts Suggestions If Adopted Will Present
Real Problem to Analysts

By Assistant Comptroller

THE BUREAU OF ACCOUNTS of the Interstate Commerce Commission has recently circulated a tentative revision of the Classification of Operating Expenses of Steam Railroads for the purpose of obtaining constructive criticisms and suggestions that will be helpful in preparing the proposed revision for submission to the commission.

The chief purpose of the revision appears to be a reduction in the accounting expenses of the carriers through a decrease in the number of primary accounts and the simplification of the methods of distributing common expenses to primary accounts, combined with more effective statistical control of expenditures by grouping expenses along strictly departmental lines. As a further aid to analysis, the revision provides that the primary accounts shall be kept so as to show separately in sub-accounts charges for labor, material and miscellaneous items. There are also other changes in the present classification that will be discussed in the detailed analysis of the tentative revision that follows.

These various changes present a very much more drastic revision of the classification of operating expenses than that of July 1, 1914. Future comparisons with expenses as now classified, either by general accounts or by the principal primary accounts, would be of doubtful value without restatement of those expenses in accordance with the provisions of the new classification. As this would doubtless

be required by many railroad executives in order to preserve the continuity of the statistics any saving in original accounting expense through the reduction in the number of primary accounts and the simplification of methods of distribution would be largely offset by the increased cost of analysis in making comparisons with previous years.

The effect of the tentative revision on these comparisons will be considered, first, with respect to the changes in the general expense accounts, Maintenance of Way and Structures, Maintenance of Equipment, Transportation, etc., and second with respect to the changes in the primary accounts included under each general account.

The tentative revision as prepared by the Bureau of Accounts does not contain a table showing exactly what disposition is made of each primary account of the present classification. It is to be hoped that such a comparison will be prepared by that Bureau when the revision is finally made effective. As an aid to the discussion of the tentative revision the following tables have been prepared from the description of charges to the various accounts contained in the text of the tentative revision, and it is believed that they reflect with substantial accuracy the changes in the present classification. In order to show the relative importance of the various general and primary accounts and the approximate effect of the revision on comparisons with-

TABLE 1—CHANGES IN GENERAL ACCOUNTS

	All Class I roads in 1922		All Class I roads in 1922
I—Maintenance of Way and Structures as now stated.....	\$728,663,534	Account 418 Loss and Damage, Freight....	39,904,815
Add—Charges now made to Profit and Loss Account 619 in connection with fixed property retired and not replaced		Account 419 Loss and Damage, Baggage....	373,309
Deduct—Account 274, Injuries to Persons.....	4,059,236	Account 420 Injuries to Persons.....	24,672,758
Store Expense, now distributed to primary M. of W. & S. accounts.....		Store Expense now distributed to Primary Transportation accounts	
Equalization—Way and Structures.....Cr.	25,240	Salaries and expenses of special agents.....	
The net result of these additions and deductions is the revised General Account I, Roadway and Structures Department, except for changes in the depreciation and retirement accounts, which will be announced by the Commission at a later date.		The net result of these additions and deductions is the revised General Account III, Transportation Department.	
II—Maintenance of Equipment as now stated.....	\$1,252,517,250	III—Traffic as now stated	\$86,506,907
Add—Account 348 Engine House Expenses, Yard....	31,735,668	There is apparently no difference between this General Account and the revised General Account IV, Traffic Department.	
Account 460 Engine House, Expenses, Train....	92,430,738	VI—Miscellaneous Operations as now stated.....	\$47,653,795
Account 402 Train Supplies and Expenses (in part)		VII—General, as now stated.....	156,705,481
Charges now made to P. & L. Account 619, in connection with Equipment Retired.....		Total	\$204,359,276
Deduct—Account 332 Injuries to Persons.....	4,685,503	Add—Account 407 Telegraph and Telephone Operation	9,978,382
Account 338 Equalization, Equipment....Cr.	64,056	Store expense now distributed to various primary accounts chiefly in M. of W. & S. M. of E. and Transportation	
Store expense now distributed to primary M. of E. accounts.....		Salaries and expenses of special agents, railroad police and watchmen now charged to Account 371 and other accounts.....	
The net result of these additions and deductions is the revised General Account II, Equipment Department, except for changes in Joint Facility Accounts and Depreciation and Retirement accounts, which will be announced by the Commission at a later date.		There are apparently no deductions.	
IV—Transportation—Rail line as now stated.....	2,140,149,596	The result is the revised General Account V, Other Departments and Expenses.	
V—Transportation—Water line as now stated.....	9,614,227	V—Compensation for Damages.	
Total transportation	\$2,149,763,823	New General Account, consisting of following primary accounts of present classification:	
Add—New Account 302, Transfer and delivery service (items formerly charged to revenue accounts)		Account 274 Injuries to Persons (M. of W. & S.)..	\$4,059,236
Deduct—Account 388 Engine House Expenses, Yard	\$31,735,668	Account 332 Injuries to Persons (M. of E.).....	4,685,503
Account 400 Engine House Expenses, Train	92,430,738	Account 420 Injuries to Persons (Transportation)..	24,672,758
Account 402 Train Supplies and Expenses (in part)		Account 418 Loss and Damage, Freight.....	39,904,815
Account 433 Incidental Water Line (in part)		Account 419 Loss and Damage, Baggage.....	373,309
Account 407 Telegraph and Telephone Operation	9,978,382	Account 416 Damage to Property.....	5,356,628
Account 416 Damage to Property.....	5,356,628	Account 417 Damage to Livestock on Right of Way	3,506,208
Account 417 Damage to Live Stock on Right of way	3,506,208	Various charges included in insurance accounts under other general accounts of present classification which are applicable to above primary accounts....	
		Account 433 Incidental Water Line (in part).....	
		VIII—Transportation for Investment—Credit as now stated.	\$7,288,456
		There is apparently no difference between this general account and revised General Account VII, Transportation for Investment—Credit.	

out restatement of the figures, the amount of each primary account for all Class I railroads for 1922 is given in these tables as well as the combination of the primary accounts of the present classification into the primary accounts of the revised classification. A number of items included in the primary accounts of the revised classification are not available from the published statistics of the carriers, and it has been necessary to leave these items blank. The number and importance of these items indicates the difficulties that will be encountered in making comparisons with previous years.

Changes in General Expense Accounts

Table 1 gives the approximate changes in the various general accounts of the present classification necessary to arrive at the corresponding general account of the revised classification.

Comparison of general accounts under the revised classification with general accounts under the present classification would not be particularly complicated if the revision involved merely the transfer of primary accounts in toto from one general account to another. The amount of each

TABLE 2—COMPARISON OF EACH PRIMARY ACCOUNT UNDER THE TENTATIVE REVISION OF THE CLASSIFICATION OF OPERATING EXPENSES WITH THE CORRESPONDING PRIMARY ACCOUNT OR ACCOUNTS UNDER THE PRESENT CLASSIFICATION

Tentative Revision I—ROADWAY AND STRUCTURES DEPT.* Account	Present Classification I—MAINTENANCE OF WAY AND STRUCTURES Account	Tentative Revision II—EQUIPMENT DEPARTMENT* Account	Present Classification II—MAINTENANCE OF EQUIPMENT Account
201 Supervision	201 Superintendence	251 Supervision	301 Superintendence
202 Roadway maintenance	202 Roadway maintenance	252 Equipment, shop and power plant machinery	302 Shop machinery.....
	220 Track laying and surfacing		304 Power plant machinery
	272 Removing snow, ice and sand.....	253 Locomotive repairs	306 Power substation apparatus
	204 Underground power tubes		308 Steam locomotives—Repairs
	225 Crossings and signs (in part)	254 Freight car repairs	311 Other locomotives—Repairs
203 Ties	212 Ties		314 Freight train cars—Repairs
204 Nails	214 Rails	255 Passenger car repairs	320 Motor equipment of cars—Repairs (in part)
205 Other track material	216 Other track material..		317 Passenger train cars—Repairs
206 Ballast	218 Ballast	256 Floating equipment repairs	320 Motor equipment of cars—Repairs (in part)
207 Fences and signs	221 Right of way fences..	257 Work equipment repairs	323 Floating equipment—Repairs
	223 Snow and sand fences and snow sheds....	258 Miscellaneous equipment repairs	326 Work equipment—Repairs
	225 Crossings and signs (in part).....	259 Shop expense	329 Miscellaneous equipment—Repairs
208 Bridges, trestles and culverts	208 Bridges, trestles and culverts	260 Preparing motive power	No account—Shop expenses are distributed to the primary accounts.
	210 Elevated structures... ..		No such M. of E. account, it corresponds to accounts under Transportation.
209 Tunnels and subways	226 Tunnels and subways	261 Preparing cars	388 Engine house expenses—Yard
210 Roadway and shop structures	229 Roadway buildings... ..		400 Engine house expenses—Train
	235 Shops and engine houses	262 Insurance	No such M. of E. account. Corresponding account under Transportation.
	245 Gas producing plants	263 Stationery and printing	402 Train supplies and expenses (in part).....
	251 Power plant dams, canals and pipe lines	264 Other expenses	333 Insurance
	253 Power plant buildings		334 Stationery and printing
211 Station and office buildings	255 Power substation buildings		335 Other expenses.....
	227 Stations and office buildings		
	237 Grain elevators.....		
	239 Storage warehouses... ..		
	241 Wharves and docks... ..		
	243 Coal and ore wharves		
212 Fuel and water stations	231 Water stations.....		
	233 Fuel stations.....		
213 Telegraph and signal systems	247 Telegraph and telephone lines		
	249 Signals and interlockers		
214 Electric transmission systems	257 Power transmission systems		
	259 Power distribution systems		
	261 Power line poles and fixtures		
	263 Underground conduits		
215 Miscellaneous structures	265 Miscellaneous structures		
216 Machines and tools	269 Roadway machines... ..		
	271 Small tools and supplies		
217 Public improvements	273 Assessments for public improvements		
	267 Paving (in part).....		
218 Insurance	275 Insurance		
219 Stationery and printing	276 Stationery and printing		
220 Other expenses	277 Other expenses.....		
221 Work train service	No account—Expense distributed among the accounts affected		
222 Joint facilities—Dr.	278 Maintaining joint tracks, yards and other facilities—Dr.		
223 Joint facilities—Cr.	279 Maintaining joint tracks, yards and other facilities—Cr.		

*Changes in depreciation and retirement accounts will be announced by the Commission at a later date.

*Changes in joint facility, depreciation and retirement accounts will be announced by the Commission at a later date.

Notes in connection with primary accounts under I, Roadway and Structures Department, and II, Equipment Department.

In addition to the consolidation of primary accounts and other changes shown above, the following revisions of accounting procedure affect the comparability of primary accounts under the two classifications.

1. Store expense distributed to primary accounts under the present classification is excluded from primary accounts of the revision.

2. Charges for service loss in connection with property retired and not replaced now made to Profit and Loss Account 619, will presumably be included in the appropriate primary operating expense accounts of the revision.

3. Elimination of equalization expenses.

4. The revision provides that insurance recovered in connection with fire or other damage to property will be credited to the appropriate insurance account instead of the primary account or accounts charged with the cost of repairing the damage.

5. The revision provides that rental of property on a fixed sum basis shall be charged to the appropriate rent account and shall not be apportioned between rent, repairs and depreciation as at present.

6. Strike expenses. The revision provides detailed instructions covering distribution of expenses in connection with strikes, the accounting for which has not been entirely uniform under the present classification. As a rule, most of these expenses have been charged to the appropriate "Other expenses" account. Under the revision, they will be divided chiefly between the appropriate "Supervision" and "Other expenses" accounts and the new accounts 401, "Interdepartmental expenses" and 408, "Police."

7. Minimum charge for additions and betterments and credit for retirements of \$100; amounts under this limit being charged or credited to the appropriate operating expense account instead of to capital account as at present.

primary account is given in the annual report of the individual railroads to the Interstate Commerce Commission from which the figures for all Class I roads in Table 1 were compiled. The adjustment of the present general accounts to the revised general accounts would be comparatively simple.

There are, however, a number of items for which no amounts are shown on Table 1 because they are not available from the schedules of primary accounts in the reports

of the carriers to the Interstate Commerce Commission. These items are as follows:

ROADWAY AND STRUCTURES DEPARTMENT

1. Service loss on fixed property retired and not replaced. This loss is now charged to Profit and Loss Account 619, which also includes charges for service loss on equipment retired applicable to the period prior to July 1, 1907. The division of this account between fixed property and equipment is not ordinarily given on the Profit and Loss statements. The total charges to Profit and Loss Account 619 for both fixed prop-

TABLE 2—CONTINUED FROM OPPOSITE PAGE

Tentative Revision		Present Classification		Tentative Revision		Present Classification	
III—TRANSPORTATION DEPARTMENT		IV—TRANSPORTATION—RAIL LINE		IV—TRAFFIC DEPARTMENT		III—TRAFFIC	
Account		Account		Account		Account	
301 Supervision		371 Superintendence	\$62,063,190	351 Supervision		351 Superintendence	\$29,475,299
302 Dispatching trains		372 Dispatching trains	32,349,958	352 Solicitation		352 Outside agencies	34,019,251
303 Station service		373 Station employees	295,771,405			354 Traffic association	2,096,120
		374 Weighing, inspection and demurrage bureaus	4,537,990	353 Advertising and development		355 Fast freight lines	41,994
		375 Coal and ore wharves	6,947,516			353 Advertising	7,481,818
		376 Station supplies and expenses	20,668,782	354 Stationery and printing		356 Industrial and immigration bureaus	1,526,233
		432 Operation of terminals (Water-line)	4,162,088	355 Other expenses		358 Stationery and printing	11,771,492
304 Transfer and delivery service						359 Other expenses	55,816
		New account including expenses formerly charged to revenue accounts		Note—The revision does not provide a special account for "Insurance" corresponding to Account 357 of the present classification.			
305 Yard service		377 Yard masters and yard clerks	54,380,027	Tentative Revision		Present Classification	
		378 Yard conductors and brakemen	119,740,312	V—OTHER DEPARTMENTS AND EX-PENSES		VI—MISCELLANEOUS OPERATIONS	
		379 Yard switch and signal tenders	10,957,567	Account		VII—GENERAL	
		380 Yard enginemen	72,316,060	401 Interdepartmental expenses		451 Salaries and expenses of general officers	16,164,708
		381 Yard motormen	638,500	402 Accounting		452 Salaries and expenses of clerks and attendants	85,143,397
		385 Water for yard locomotives	4,063,110	406 Real estate and tax		453 General office supplies and expenses	6,485,144
		386 Lubricants for yard locomotives	1,202,045	410 Claims organization		458 Stationery and printing	5,353,896
		387 Other supplies for yard locomotives	1,342,427	404 Law		454 Law expenses	16,639,728
		389 Yard supplies and expenses	3,735,365	405 Purchasing and stores		Transfer of store expense from other primary accounts	
306 Fuel for yard motive power		382 Fuel for yard locomotives	80,911,659	407 Telegraph and telephone		Transfer from transportation—Rail Line, Account 407, Telegraph and Telephone	9,978,382
307 Electricity for yard motive power		383 Yard switching power produced	316,464	408 Police		Transfer of charges chiefly from primary Account 371, Superintendence Transportation Rail Line	
308 Train service		384 Yard switching power purchased	120,632	409 Dining and hotel service		441 Dining and buffet service	30,708,467
		392 Train enginemen	207,758,831	411 Valuation		442 Hotels and restaurants	9,484,264
		393 Train motormen	2,936,483	412 Pensions and relief		457 Valuation expenses	7,883,420
		397 Water for train locomotives	21,254,581	413 Incidental operations		456 Relief department expenses	1,274,718
		398 Lubricants for train locomotives	7,311,512			457 Pensions	10,245,024
		399 Other supplies for train locomotives	6,908,170			443 Grain elevators	1,651,455
		401 Trainmen	241,076,908			444 Stock yards	706,679
		402 Train supplies and expenses (in part)				445 Producing power sold	3,668,395
		415 Clearing wrecks (in part)		414 Other expenses		446 Other miscellaneous operations	1,434,535
309 Fuel for train motive power		394 Fuel for train locomotives	437,372,270			460 Other expenses	5,821,277
		415 Clearing tracks (in part)		Note—The revision does not provide a special account for "Insurance" corresponding to Account 455 of the present classification.			
310 Electricity for train motive power		395 Train power produced	3,207,697	VI—COMPENSATION FOR DAMAGES		No Corresponding General Account	
		396 Train power purchased	4,525,607	Account		VARIOUS PRIMARY ACCOUNTS	
		415 Clearing wrecks (in part)		451 Injuries to persons		Account	
311 Sleeping car service		403 Operating sleeping cars	1,005,873			274 Injuries to persons (M. of W. & S.)	\$4,059,236
312 Water transfer service		408 Operating floating equipment	25,046,446	452 Damage to shipments		332 Injuries to persons (M. of E.)	4,685,503
313 Line vessel service		431 Operation of vessels	4,953,239			420 Injuries to persons (Trans.)	24,672,753
314 Signal and Interlocker operation		404 Signal and interlocker operation	25,311,355	453 Other damages		418 Loss and damage—Freight	39,904,815
315 Crossing protection		405 Crossing protection	20,956,961			419 Loss and damage—Baggage	373,309
		406 Drawbridge operation	2,133,887	454 Insurance		416 Damage to property	5,356,628
316 Insurance		414 Insurance	14,360,542			417 Damage to livestock on right of way	3,506,208
		433 Incidental water line (in part; see note)				Various charges included in insurance accounts of other general accounts of present classification which are applicable to above primary accounts	
317 Stationery and printing		410 Stationery and printing	14,351,776			433 Incidental water line (in part)	
318 Other expenses		411 Other expenses	10,496,478	VII—TRANSPORTATION FOR INVESTMENT CR.		VIII—TRANSPORTATION FOR INVESTMENT—CR.	
				470 Investment credits.			

Note—Account 433, Incidental water line, of the present classification includes charges in connection with loss and damage to freight and baggage, injuries to persons, damage to property and insurance. Charges and credits in connection with the last item will be made to new Account 316, Insurance, and in connection with the other items to the appropriate account under the new general account VI, compensation for damages.

erty and equipment for all Class I carriers for 1922 was \$33,595,155.

2. Store expense—Roadway and Structures:

The amount now included in the various primary accounts of maintenance of way and structures for store expense including inspection of ties and other material will be excluded from the primary accounts of Roadway and Structures Department and charged to a new account—405, "Purchasing and stores" under General Account V, "Other Departments and Expenses."

EQUIPMENT DEPARTMENT

3. Charges now made to Profit and Loss Account 619 in connection with equipment retired (see Item 1 above).

4. New Account 261, "Preparing Cars."

That part of present Account 402, "Train supplies and expenses" under General Account IV, "Transportation—Rail Line," covering the cost of labor, tools and supplies, used in preparing cars for service, i.e., cleaning, lighting, heating and lubricating cars, will be transferred to this new account. The cost of supplies placed on cars for consumption in train service, such as ice, lubricants, gas, etc., will remain in transportation expenses in the new consolidated primary Account 308, "Train service." The total of Account 402, "Train supplies and expenses" for all Class I Roads in 1922 was \$74,408,910, of which the larger part would be chargeable to this new account, 261, "Preparing cars."

5. Store Expense—Equipment.

The accounts now included in the various primary accounts of maintenance of equipment for store expense will be excluded from these accounts and charged to new Account 405 "Purchasing and stores."

TRANSPORTATION DEPARTMENT

6. New Account 304—Transfer and Delivery Service.

This new account includes charges formerly made to revenue accounts for the expense of operating highway vehicles for transfer of freight and other traffic between stations including payments made to others (except common carriers) for this service. It also includes cost of collection or delivery service by highway vehicles.

Probably no data is readily available as to the cost of this service in previous years.

7. Train Supplies and Expenses (in part). Cost of preparing cars.

These charges, explained under Item 4 above, will be excluded from the expenses of the Transportation Department.

8. Incidental water line expenses.

This account is split between the general accounts III Transportation Department and IV Compensation for Damages. The insurance items will be charged to Account 316—Insurance under III—Transportation Department and the cost of loss and damage and injuries to persons will be transferred to the appropriate accounts under VI—Compensation for Damages. The total of this account, however, was only \$498,900 for all Class I roads, so the change is relatively unimportant.

9. Store Expense—Transportation.

The amounts now included in the various primary accounts of Transportation for store expense will be excluded from these accounts and charged to new Account 405—Purchasing and Stores.

TRAFFIC DEPARTMENT—None.

OTHER DEPARTMENTS AND EXPENSES

10. New Account 405—Purchasing and stores.

This account consists of store expense distributed to various primary accounts chiefly in Maintenance of Way and Structures, Maintenance of Equipment and Transportation general accounts of present classification as explained above.

11. New Account 408, Police.

This account includes pay and expenses of special agents, railroad police and watchmen employed to protect property from theft and damage now charged to account 371—Superintendence (Transportation) and other accounts.

COMPENSATION FOR DAMAGES

12. Incidental Water Line (in part). (See Item 8 under Transportation Department.)

13. New Account 454, Insurance.

This account includes various charges now included in the Insurance accounts under other general accounts of present classification which are applicable to the primary accounts of VI—Compensation for Damages.

A study of the items to be added or deducted from the general accounts of the present classification to make them comparable with the corresponding general accounts of the revised classification indicates the difficulties that would be encountered even in making the most general comparisons of operating expenses under the revised classification with operating expenses under the present classification.

In the case of a more detailed analysis of the primary operating expenses, the difficulties of making a reliable comparison with the corresponding expenses of the present classification will be more serious.

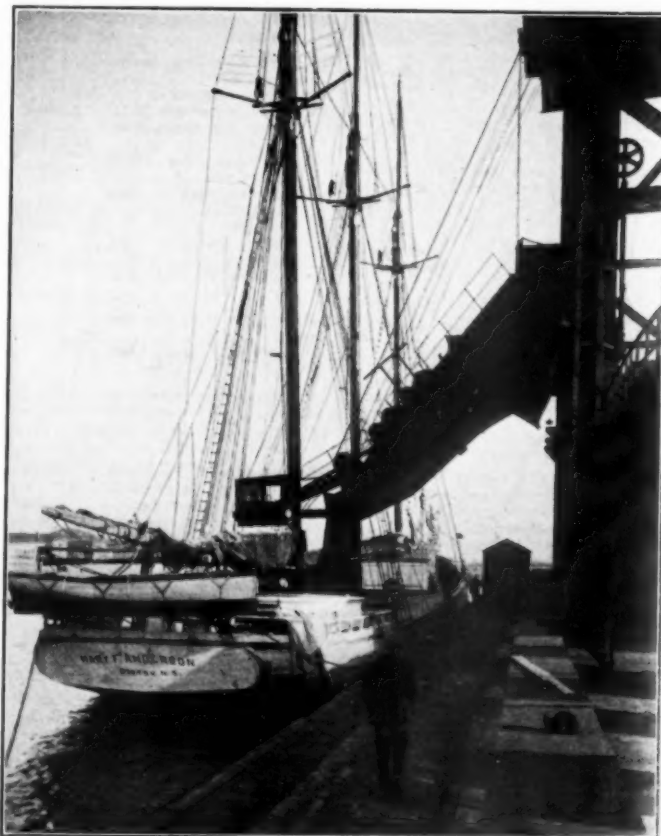
This situation is brought out by Table 2, which gives a comparison of each primary account of the revised classification with the corresponding primary account or accounts of the present classification. The amount of each account of the present classification for all Class I roads in 1922 is given in order to show the relative importance of the different accounts and the effect of the consolidations and transfers.

Conclusion

It is evident from the foregoing analysis of the changes in the present classification of operating expenses proposed by the Bureau of Accounts that the lot of the railroad accountant and statistician will be a hard one when he is called upon to analyze results from operation as reflected in the accounts of the revised classification.

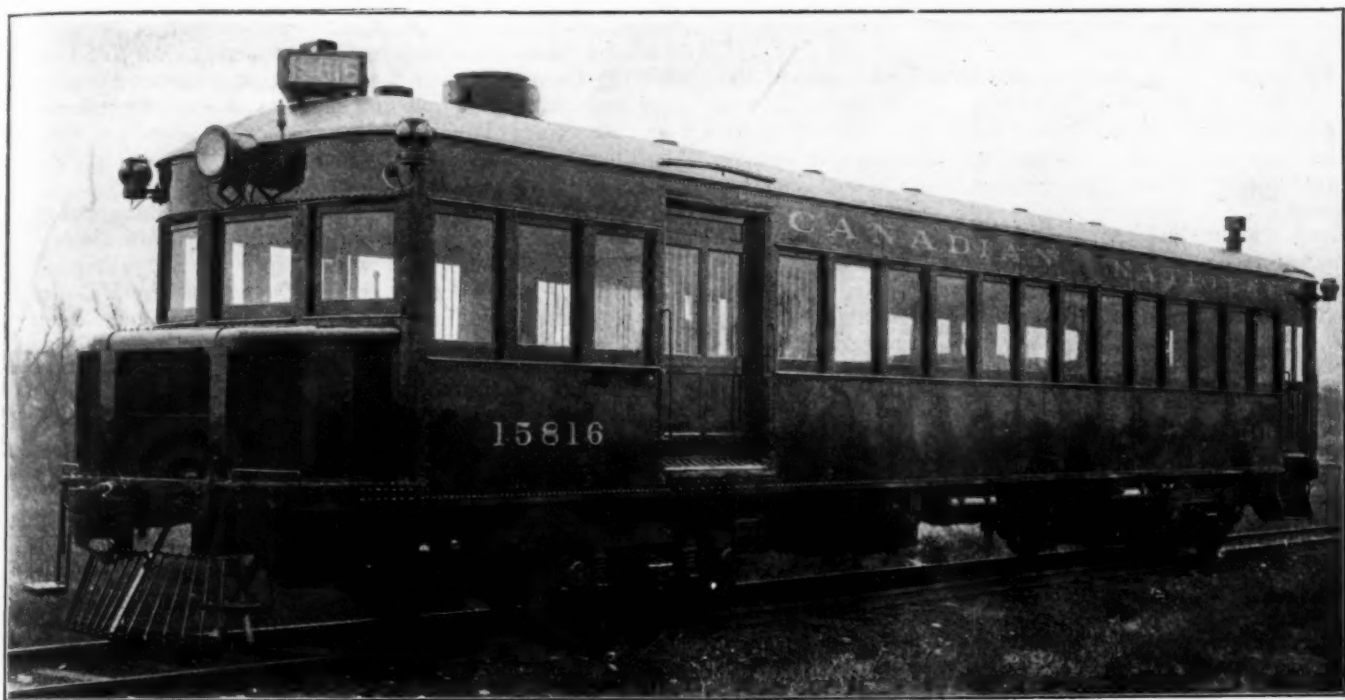
As the Bureau of Accounts invites constructive criticisms and suggestions, it is the purpose of the writer in another article to suggest some modifications of the tentative revision which he believes will somewhat lighten the burden of analysis without destroying the advantages of the revision in the way of simplified accounting.

♦ ♦ ♦ ♦



Ewing Gallotay

Loading a Sailing Vessel with Coal, Claremont Terminal of the Lehigh Valley, Jersey City, N. J.



Gasoline Motor Coach Built by the National Steel Car Corporation and Driven by a 225-Hp. Sterling Engine

Canadian National High Power Motor Coach

Seats 55 Passengers—Driven by 225-Hp. Sterling Motor—
Built by National Steel Car Corporation

THE CANADIAN NATIONAL probably has made a longer and more thorough study of the possibilities of the self-propelled rail motor car than any other railroad. In the endeavor to find out which types were the best suited to the various peculiar traffic conditions existing in different places, a number of cars have been built and tested out. Some have been small and others relatively heavy. The list has included those driven by gasoline passenger car engines, gasoline truck engines, steam engines and electric storage battery motors.

The latest addition to the list is a steel-body combined passenger and baggage car built by the National Steel Car Corporation, Hamilton, Ontario, and driven by a 225-hp. Sterling gasoline engine. This car was delivered to the Canadian National in November, 1923, and after thorough tests was placed in regular service between Toronto and Hamilton, a distance of 38.7 miles, where it is at present in operation. The car leaves Hamilton at 6:30 a.m. and arrives at Toronto at 7:35 a.m., and on the return trip, it leaves Toronto at 9:30 p.m., reaching Hamilton at 10:45 p.m. It is reported that even when running at high speed—with the governor set for 50 miles an hour—no noticeable vibration is experienced, oscillation and side sway are slight and that for smooth and silent running it compares well with standard passenger cars in steam service.

The car is of steel construction with a single arch type roof. The steel underframe includes fish belly type center sills, spaced to provide room for engine and transmission. The length of the car over all is 55 ft. 9½ in.; the length over end sills, 54 ft. 1½ in.; the width over side sheathing, 8 ft. 9 in.; the height from top of rail to floor, 3 ft. 9½ in., and the height from the top of rail to roof, 12 ft. 9 in. The weight of the car is between 40,000 lb. and 45,000 lb.

The interior is divided into two compartments. The rear or passenger compartment is 31 ft. 2 in. long and is provided with seats for 44 passengers. The front or baggage compartment is 15 ft. 2 in. long and, while intended primarily for carrying baggage and express, is fitted with collapsible wooden slat seats, which accommodate 11 passengers when occasion requires. On a basis of 55 seated passengers, the dead weight per passenger is between 75 and 80 lb.

The interior of the passenger compartment is finished in cherry with Agasote ceiling, and presents a pleasing appearance. The partition between the two compartments matches the interior finish and is provided with a double-swing door having a plate glass panel. The double, non-reversible transverse seats are upholstered in green plush with polished brass corner grabs on the seat backs. All windows are arranged to raise and are fitted with removable storm sash. The curtains are of silk-faced Pantasote with Rex rollers and Forsythe ring fixtures. A drinking water tank and cup vendor are provided. There is one saloon in the passenger compartment fitted with hopper, folding wash basin, mirror and paper towel holder.

The rear platform has two vestibule side doors and O. M. Edwards steel trap doors, covering the step openings. A vestibule end door is provided for use in case a trailer is carried. The rear body end door is of cherry with glazed panel and swings inward. The vestibule end windows are provided with storm sash and all doors are provided with weather strippings to make the platform weather proof.

The baggage compartment is sheathed with poplar, with open-carline finish. There is a sliding baggage door with 4 ft. opening on each side. All windows are arranged to

raise except the two at the driver's seat, which are arranged to drop.

The trucks are of the four-wheel pedestal type and have a 5-ft. 8-in. wheel base. The wheels are 36 in. in diameter and are steel tired. The journal bearings are of the Stafford roller type with roller end thrust. Each truck has two triple elliptic bolster springs and four helical equalizer springs.

Each end of the car is fitted with a Type D coupler. The front one is supported by a steel casting attached to the end sill in such a manner that it can be taken down easily should occasion arise to remove the engine from the car. The rear coupler is fitted with a spring draft gear.

The car is driven by a Sterling six-cylinder gasoline engine, with cylinder of 5 $\frac{3}{4}$ -in. bore and 6 $\frac{3}{4}$ -in. stroke. The power rating of the engine is 225 hp. at 1,600 r.p.m. The engine and clutch are carried on a sub-frame, which is supported from the car center sills by a three-point suspension and so arranged that the entire unit of frame, engine and clutch can be removed through the end of the car by sliding the frame brackets along the center sill bottom angles after the front coupler and radiator have been removed.

The engine is fitted with two Stromberg carburetors and triple ignition. The lighting batteries are also used for the starting motor and for ignition. There are two gasoline tanks having a combined capacity of 75 gallons, which are carried below the car body. The gasoline is pumped from

taken, the sides of the steel casing enclosing the engine were removed. The large asbestos covered sheet metal pipe leading from the top of the engine casing carries the escaping gases of combustion to a short stack extending through the car roof. The emergency passenger seats are folded back against the side walls to provide maximum space for baggage.

A Peter Smith hot water heater is installed in a separate heater room in the passenger compartment, which also contains the coal box. Hot water pipes are led along both sides of the car under the seats. Change of air is obtained by five ventilators in the car roof, which may be opened and closed from the interior.

Current for lighting is furnished by a U.S.L. Type F

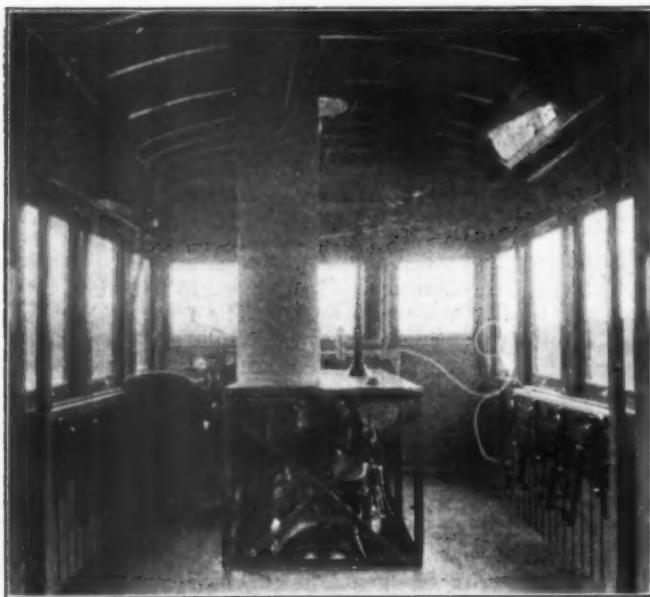


Interior of Passenger Compartment Looking Toward the Door

generator, with chain drive from the engine and 32-volt batteries underneath the car near the center. The lighting fixtures include seven center-ceiling, 50-watt lamps in the passenger compartment, two in the front compartment and two rear vestibule lamps. An electric headlight and marker lights are also provided.

The brake is of the Westinghouse combined automatic and straight air type, with provision for trailer operation. Air is furnished by a compressor connected to the transmission by a noiseless chain drive. The brake rigging on the truck is of the clasp type.

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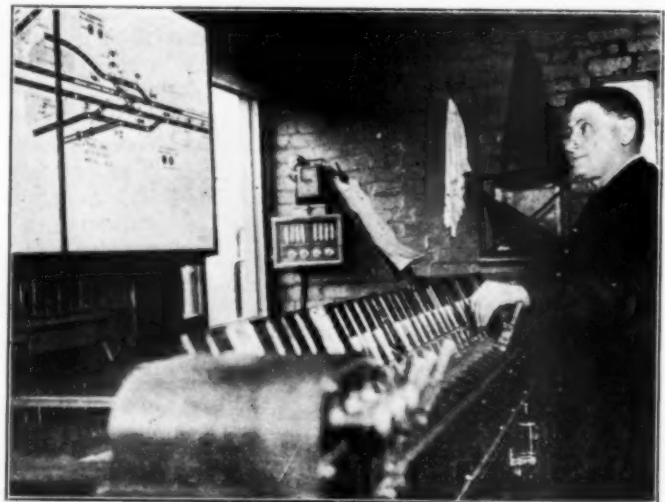


Baggage Compartment, Looking Toward Driver's Seat; Seats Folded Back and Casing Around Motor Removed

the main tanks to an auxiliary tank from which it feeds by gravity to the carburetors.

The clutch is of the multiple disk type and runs in oil. The transmission is of special design and provides four speeds forward and three speeds in reverse. The drive is through the trailing axle of the forward truck and the leading axle of the trailing truck, the power being carried from the transmission to the axles by flexible shafts and bevel gearing. The bevel gears are enclosed in a steel housing with a torque arm suspended from equalizer bars mounted on the inside axle. Provision is made for disengaging the front truck drive shaft by an operating lever near the driver's seat, thus permitting driving from the rear truck only in cases where the required tractive force is small.

When the interior view of the front compartment was



Wide World

Signal Tower, Baker Street Terminus of the Metropolitan Railway, London

Senator Cummins Proposes Consolidation Law

Intended to Facilitate Consolidation of Roads Into Systems Proposed by Commission

WASHINGTON, D. C.

A NEW PLAN designed to stimulate the consolidation of the railroads of the United States into fewer and larger systems of approximately equal financial and competitive strength by holding forth certain incentives to the roads which it is hoped will have more effect than the present law under which the Interstate Commerce Commission is now trying to work out a consolidation plan, is proposed by Senator A. B. Cummins, former chairman of the Senate Committee on Interstate Commerce, in a bill, S. 2224, introduced in the Senate on January 24. The bill is the result of a great deal of careful study of the subject by the Senator, and Secretary Hoover is also understood to have had a considerable part in its preparation. It carries out the ideas expressed in a general way by the late President Harding and more recently by President Coolidge in his address to Congress and by Secretary Hoover in his annual report. It is based with modifications on the plan for a seven-year period for voluntary consolidations which was included in the Senate draft of the bill which preceded the Transportation Act but provides the additional inducements of a federal incorporation act and powers of condemnation over minority securities or mileage.

While the bill would re-enact the most important parts of the consolidation sections of the present act, which authorize the commission to prepare a plan with which consolidations voluntarily proposed by the railroads must harmonize, it also affords more elasticity by authorizing the commission to adopt and publish alternative plans and makes more definite the provisions for modifications of the published plan. Provision is also made for the omission from the plan of terminal properties and for common use of property by order of the commission.

The outstanding new features of the bill are provision for a period of seven years after the passage of the "Railroad Consolidation Act of 1924," to be known as the period of voluntary action, and then for a form of pressure intended to induce consolidations by authorizing the commission to adjust the divisions of through rates within the incompleting systems so that each road shall have approximately the same surplus available for dividends in proportion to the value of their respective properties, "thereby approaching, as nearly as may be, the condition which would exist" if the roads were consolidated.

During the first two of the seven years, according to the bill, two or more carriers may propose a plan for consolidation by reorganization which may be authorized by the commission even before the plan is completed. During the next five years consolidation committees appointed by the commission would attempt to bring about consolidations by negotiation, with the aid of the federal incorporation law, and an authorization to a road which has acquired 51 per cent or more of the shares of another carrier in the proposed system to condemn the remaining securities.

After the voluntary period has expired carriers owning the major part of the mileage within the proposed system may be authorized to acquire the remainder by condemnation proceedings.

Title II of the bill prescribes the details for the organization and reincorporation of federal railroad corporations where such reincorporation will further the commission's consolidation plan.

The more important provisions of the bill are as follows:

Title I—Amendments to Consolidation

Provisions of the Interstate Commerce Act

Section 1. That paragraph (2) of section 5 of the Interstate Commerce Act, as amended, is amended by adding at the end thereof a new sentence to read as follows: "This paragraph shall cease to be in effect upon the passage of the Railroad Consolidation Act of 1924; except that thereafter the Commission may continue to make supplemental orders under paragraph (3) in respect of any order which was made under this paragraph before the passage of such Act."

Section 2. That paragraphs (4), (5), and (6) of Section 5 of the Interstate Commerce Act, as amended, are amended to read as follows:

"(4) The Commission shall as soon as practicable prepare and by order adopt a plan for the consolidation of the railway properties of the continental United States into a limited number of systems. In the division of such railway properties into such systems under such plan, competition shall be preserved as fully as possible, and wherever practicable, the existing routes and channels of trade and commerce shall be maintained. Subject to the foregoing requirements of this paragraph, the several systems shall be so arranged that the cost of transportation as between competitive systems and as related to the values of the properties through which the service is rendered shall be the same, so far as practicable, so that these systems can employ uniform rates in the movement of competitive traffic and under efficient management earn substantially the same rate of return upon the value of their respective railway properties. In its plan the Commission may, to such extent as it finds the public interest requires,—

"(a) Omit from the systems terminal properties, including mainline tracks for a reasonable distance outside the terminals; and either omit from all the systems or include in any one of the systems, properties comprising any section of railway lines; if the Commission further finds that the properties are or ought to be available for common use by two or more systems. The Commission shall in its plan designate the extent to which such systems shall have the common use of such properties.

"(b) Provide for the extension or abandonment of the properties of any system, or for the enlargement of the properties of terminals or lines that are, under subdivision (a), omitted from the systems?

"Where terminal properties are to become, under the plan provided for in this paragraph, a part of a system, the Commission may, in its order adopting the plan as authorized in paragraph (5), attach such conditions as will insure the joint use, in the public interest, of such terminal properties by such system in connection with any other system or systems.

"(5) When the Commission has agreed upon a tentative plan it shall give the same due publicity and upon reasonable notice, including notice to the Governor of each State, shall hear all persons who may file or present objections thereto. The Commission is authorized to prescribe a procedure for such hearings and to fix a time for bringing them to a close. After the hearings are at an end, the Commission shall by order adopt a plan for such consolidation and publish the same, or it may adopt and publish alternative plans if in its judgment more than one plan would fulfill the requirements of paragraph (4) and if it finds that alternative plans would facilitate the voluntary consolidation hereinafter in this section provided for. The Commission may at any time after the adoption of such plan or plans, either upon its own motion or upon application, reopen the subject to such extent as it deems advisable, for the adoption and publication, after notice and hearing as above provided in this paragraph, of such modifications as in its judgment will promote the results sought and described in paragraph (4). As used hereinafter in this section, the term 'plan' means any plan or alternative plan, including all modifications thereof, if any, adopted and published under this paragraph.

"(6) It shall be lawful for two or more carriers to carry out the consolidation of the railway properties, or any part thereof, of any system, by a reorganization approved and authorized by the Commission under paragraph (7) or (8). For the purpose of this section, the term 'reorganization' means—

"(a) A consolidation or merger of two or more carriers;

"(b) A reincorporation of a carrier, as a Federal railroad corporation under Title II of the Railroad Consolidation Act of 1924;

"(c) An acquisition of any part of the properties of a carrier;

"(d) An acquisition of the right to operate any part of the railway properties of a carrier; or

"(e) An acquisition of securities of a carrier in pursuance of an arrangement to acquire control of such carrier, directly or indirectly, through voting power or otherwise; or an acquisition of securities of a carrier in which control has been so acquired.

"(7) If two or more carriers propose a reorganization plan prior to the expiration of two years after the passage of the Railroad Consolidation Act of 1924, the carriers shall jointly apply to the Commission for approval of the plan. Thereupon the Commission shall notify the Governor of each State in which any part of the properties sought to be consolidated are situated, and the carriers involved in the proposed reorganization, of the time and place for a public hearing. If after such hearing the Commission finds (a) that the public interest will be promoted by the reorganization, (b) that the reorganization consolidates or furthers the consolidation of the railway properties of the carriers into one corporation for ownership, management, and operation, (c) that the reorganization will, in the judgment of the Commission, promote the results sought and described in paragraph (4) or, if a plan of consolidation has been adopted and published, is in harmony with such plan, and (d) that the conditions of paragraph (10) will be fulfilled, it may enter an order approving the reorganization plan and authorizing the reorganization with such modifications and upon such terms, conditions, and in accordance with such procedure, as it may prescribe. Thereupon the reorganization may be effected in accordance with such order, if all the carriers involved assent thereto, the law of any State or the decision or order of any State authority to the contrary notwithstanding. The assent of any such carrier shall be held to be given if the holders of at least a majority of the voting shares of the carrier approve the reorganization plan at a shareholders' meeting. The reorganization plan may provide for the organization of, or reincorporation of a carrier as, a Federal railroad corporation under Title II of the Railroad Consolidation Act of 1924, by incorporators designated in the plan or by at least a majority of the directors of such carrier respectively.

"(8) If, after the plan of consolidation has been adopted (but not before the expiration of a period of two years after the passage of the Railroad Consolidation Act of 1924), the railway properties within any system have not been consolidated into one corporation for ownership, management, and operation, the Commission shall appoint for the system a committee to be known as a 'Consolidation Committee.' Each such committee shall be composed of a representative who shall be a member of the Commission to be selected by it and two representatives of each of the carriers any part of whose railway properties are within the system, one for the shareholders and one for the creditors, respectively, to be selected in accordance with regulations prescribed by the Commission. Vacancies in the membership of the committee shall be filled in the same manner as the original selection. No vacancy or failure to select a member of the committee shall extinguish or diminish the powers or duties of the committee or the remaining members thereof. It shall be the duty of the committee to ascertain the value of the railway properties within the system, of the carriers who have appointed representatives upon the committee, by taking the final value thereof as determined under section 19a of the Interstate Commerce Act, as amended, and by adding thereto, the value of additions and betterments made subsequent to the time of valuation and deducting therefrom depreciation suffered and the value of any part of the property which has been abandoned, sold, or otherwise retired, since such time. Each such committee shall also determine the value of each class or kind of the outstanding securities of such carriers, and shall prepare, and if agreement can be reached, determine upon the exchange of securities or other form of reorganization regarded as the most expeditious and practicable way of bringing about the consolidation, and upon the terms, conditions, and procedure for the reorganization. If the Committee cannot determine upon any of such matters, it shall so report to the Commission which shall thereupon take the whole subject into consideration and submit to the committee its views thereon. Whenever such matters have been determined and included in a reorganization plan in respect of carriers whose properties comprise the whole or any part of the railway properties within the system, and agreed upon by all the members of the committee representing the Commission and such carriers, such members may jointly apply to the Commission for approval of the reorganization plan. If upon such application the Commission finds (a) that the public interests will be promoted by the reorganization, (b) that the reorganization is in harmony with the plan of consolidation and consolidates or furthers the consolidation of the railway properties of the system into one corporation for ownership, management, and operation, and (c) that the conditions of paragraph (10) will be fulfilled, it may enter an order approving the reorganization plan and authorizing the reorganization in accordance therewith, or disapproving and directing the modification of the plan in particulars specified in the order. If disapproved, new reorganization plans may be agreed upon and

application for reorganization in accordance therewith made and acted upon in the same manner as an original reorganization plan and application. Upon the approval of the reorganization plan, the reorganization may be effected in accordance with the order of the Commission, the law of any State or the decision or order of any State authority to the contrary notwithstanding. The reorganization plan may provide for the reorganization of, or the reincorporation of a carrier as, a Federal railroad corporation under Title II of the Railroad Consolidation Act of 1924, by incorporators designated in the plan, or by at least a majority of the directors of the carrier.

"(9) Any corporation which has acquired 51 per centum or more of the outstanding voting shares of any carrier whose railway properties are within the system, may, if authorized by the Commission, condemn the remaining securities of such carrier, as provided in section 235 of the Railroad Consolidation Act of 1924.

"(10) No reorganization plan shall be approved by the Commission under paragraph (7) or (8),—

"(a) If the reorganization plan provides for the payment of rents upon railway properties in excess of a fair return upon the value of such properties, as determined by the Commission.

"(b) Unless the reorganization plan prohibits the issuance at any time by any carrier of securities, the aggregate par values of which plus the aggregate par values of its outstanding securities, will at such time exceed the value, (as determined by the Commission or the Consolidation Committee in case of a reorganization approved under paragraph (7) or (8), respectively) of the properties of the carrier and of the properties to be acquired with the proceeds of the issue. For the purpose of this subdivision, the amount of the par values of the outstanding securities includes, in the case of shares without a par value, the amount of the consideration fixed for such shares. The issuance of securities by such carrier in violation of the plan of reorganization shall have the same effect as the issuance of securities by a carrier without having first obtained the authorization therefor under section 20a.

"(11) After the issuance of the order adopting the plan of consolidation, a reorganization of two or more carriers shall be effected only in accordance with the provisions of this section (other than those of paragraph (2)).

"(12) The provisions of section 20a (other than those of paragraph (10)) shall not apply to any issuance of securities, if made in accordance with the terms and conditions of an order issued under paragraph (7) or (8) approving a reorganization. The provisions of paragraphs (18), (19), and (20) of section 1 shall not apply to any extension, enlargement, or abandonment of properties, provided in the plan of consolidation, if made in accordance with the terms and conditions of an order issued under paragraph (7) or (8), nor shall such paragraphs apply to any construction, acquisition, or operation of lines, or transportation over such lines, in pursuance of the extension, enlargement or abandonment.

"(13) The Commission may at any time by order require railway properties to be made available for common use, as provided in the plan of consolidation. The terms of such use, and the compensation and damages therefor, shall be agreed upon, fixed, paid, and recovered, in accordance with the provisions of paragraph (4) of section 3. The Commission may, without compliance with paragraph (21) of section 1, at any time by order require a carrier to extend or enlarge its properties, as provided in the plan of consolidation. Any refusal or neglect to comply with the order shall render the carrier liable as provided in such paragraph. For the purposes of this paragraph a carrier may, if authorized by the Commission, exercise the power of eminent domain as provided in Section 234 of the Railroad Consolidation Act of 1924.

"(14) (a) No stamp tax shall be levied or collected under the revenue laws of the United States in respect of the issuance, sale, agreement to sell, memorandum of sale, delivery, or transfer, or any security in pursuance of a reorganization in accordance with a plan or reorganization approved by the commission under this section.

"(b) Gain or loss upon the sale or other disposition of property, and income from any distribution, in connection with any such plan or reorganization, shall not be recognized or taxed to the transferor, transferee, or distributee, under the revenue laws of the United States; but the basis for determining gain or loss upon the subsequent sale or other disposition of such property or of any evidence of interest in a corporation making any such distribution, and the basis upon which depletion, exhaustion, wear and tear, and obsolescence are to be allowed in respect of such property, shall be properly adjusted in accordance with the exemption, under regulations prescribed by the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury.

"(c) No reorganization in accordance with any such plan or reorganization and no incorporation or reincorporation, or issuance or exchange of evidences of interest or indebtedness, or gain from the sale or other disposition of property, or income from any

distribution, in connection therewith, shall be subject to tax by the several States.

"(15) That acts and proceedings provided for in paragraphs (6), (7), (8), (9), and (10), shall be known as the acts and proceedings in the period of voluntary action on the part of carriers composing any system, and their shareholders, holders of their bonds and other evidences of indebtedness, and other persons having a contractual right to participate in their management and control. Such period shall continue for seven years from the passage of the Railroad Consolidation Act of 1924 (or until the adoption of the plan of consolidation, if not adopted prior to such time). When the period of voluntary action has expired, all the rights, powers, privileges, and immunities hereinbefore granted or prescribed shall continue until the consolidation of the railway properties within each system is completed in accordance with the plan of consolidation; but in addition thereto, if the Commission finds, after the expiration of the period of voluntary action, that such consolidation has not been so completed within any system, it shall have power to adjust, within any such incomplete system, the operating income of connecting carriers, derived from the transportation of persons and property within the system over the lines of two or more such carriers, by establishing just, reasonable, and equitable divisions of joint rates, fares, and charges, for such transportation, so that the net operating income, under honest, efficient, and economical management, and average normal conditions, and reasonable expenditures for maintenance of way, structure, and equipment, will be equal, as nearly as may be, to a fair return upon the value of the railway property within the system of each of the carriers,—all to the end that the surplus of each such carrier, accrued during any year and available for distribution as dividends, shall, if taken in proportion to the value of such railway property, be substantially the same in the case of each such carrier, thereby approaching, as nearly as may be, the condition which would exist if the railway properties of all such carriers, were, in accordance with the plan of consolidation, consolidated into one corporation for ownership, management, and control.

"(16) After the period of voluntary action has expired, any carrier or carriers owning the major part of the main track mileage within any system, may (whether or not such carriers were organized or have become reincorporated as Federal railroad corporations under Title II of the Railroad Consolidation Act of 1924) propose a reorganization plan which provides for the acquisition by condemnation proceedings, in accordance with section 234 of such Act, of the remainder of such main track mileage and the other railway properties within the system. Such carrier shall thereupon apply to the Commission for approval of the plan and the Commission shall notify the Governor of each State in which any part of the properties to be consolidated through such condemnation proceedings are situated, and the carriers involved in the proposed reorganization, of the time and place for a public hearing. If after such hearing the Commission finds (a) the public interest will be promoted by the reorganization, (b) that the reorganization is in harmony with the plan of consolidation, and (c) that the conditions of paragraph (10) will be fulfilled, it may enter an order approving the reorganization plan and authorizing and directing the reorganization through such condemnation proceedings, with such modifications and upon such terms and conditions as it may prescribe. Thereupon the reorganization through condemnation proceedings may be effected in accordance with such order, the law of any State or the decision or order of any State authority to the contrary notwithstanding. No reorganization plan, other than one proposed under this paragraph, shall provide for the condemnation of main track mileage and other railway properties authorized by this paragraph.

"(17) That as used in paragraphs (4) to (17), inclusive, of this section—

"(a) The term 'railway properties' means properties held for or used in the service of transportation or necessary or convenient for such service.

"(b) The term 'carrier' means a carrier as defined in section 15a, and, in addition, a corporation or association that solely or jointly through controls a carrier as so defined, either directly or indirectly, through voting power or otherwise.

"(c) The term 'securities' includes shares, bonds, or other evidences of interest or indebtedness."

Sec. 3. That paragraphs (7) and (8) of the Interstate Commerce Act, as amended, are hereby amended by striking out the paragraph numbers at the beginning thereof and inserting, in lieu of such paragraph numbers, the figures "17" and "18" respectively.

Sec. 4. That the second paragraph of the Act entitled "An Act to amend section 407 of the Transportation Act, 1920," approved June 10, 1921, is hereby made a part of section 5 of the Interstate Commerce Act and is amended by striking out the paragraph number at the beginning thereof and inserting, in lieu of such paragraph number, the figure "19."

Sec. 5. That paragraphs (9), (10), and (11), of section 5 of the Interstate Commerce Act, as amended, are hereby amended by striking out the paragraph numbers at the beginning thereof and

inserting, in lieu of such paragraph numbers, the figures "20," "21," and "22," respectively.

Sec. 6. That any action taken prior to the passage of this Act, under paragraphs (2), (4), (5), and (6), of section 5 of the Interstate Commerce Act, as amended, by the Commission or in pursuance of an order of the Commission made prior to such passage, shall, notwithstanding the amendment of such paragraphs by this Act, have after the passage of this Act, the same effect as though this Act had not been passed.

Title II.—Federal Railroad Corporations

Part 1.—Organization and Reincorporation

PURPOSES.

Some of the principal provisions under this title are:

Sec. 201. (a) A Federal railroad corporation may be organized, and any carrier may be reincorporated as a Federal railroad corporation, under this title, (1) to own, manage, or operate the railway properties, or any part thereof, that are within one (but not more than one) of the railroad systems provided by the plan of consolidation of railway properties adopted by the Commission under section 5 of the Interstate Commerce Act, as amended; and (2) to effect any reorganization approved by the Commission under paragraph (7) or (8) of such section.

(b) No Federal railroad corporation may be organized, and no carrier reincorporated as a Federal railroad corporation, except in accordance with authority granted by the Commission in an order approving a plan of reorganization under paragraph (7) or (8) of section 5 of the Interstate Commerce Act, as amended.

* * *

Sec. 205. The Commission shall issue to the incorporators a certificate of incorporation if it finds that sections 201 to 204, inclusive, have been complied with.

* * *

EFFECT OF REINCORPORATION.

Sec. 207. (a) In the case of the reincorporation of a carrier, such carrier shall become a Federal railroad corporation upon the issuance of the certificate of incorporation.

(b) Except as otherwise specifically provided in the plan of reorganization approved under paragraph (7) or (8) of section 5 of the Interstate Commerce Act, as amended—

(1) The valid outstanding securities of such carrier shall be, until exchanged, the securities of the Federal railroad corporation.

(2) The valid claims of or against such carrier shall become claims of or against, and may be enforced by or against, such corporation.

(c) Suits or proceedings by or against such carrier shall be continued by or against such carrier, but the corporation may upon its motion be made a party thereto.

(d) The rights, privileges, powers, or immunities of any person, except as otherwise provided in this section, shall not be affected by the reincorporation.

Part 2—Amendments to Articles of Incorporation

CHANGES TO BE EFFECTED.

Sec. 221. (a) A Federal railroad corporation shall have power, in accordance with the provisions of this part of this title, to make during its corporate existence, the following changes:

(1) A change in name.

(2) A change in the location of the principal office.

(3) A change in duration of corporate existence.

(4) An increase or decrease in the number of shares in any class of shares that the corporation may issue; a retirement of an existing class of shares; and an addition of a new class of shares.

* * *

(d) A statement of the changes and amendments so adopted shall be filed with the Commission.

METHODS OF DECREASING NUMBER OF SHARES.

Sec. 222. A Federal Railroad corporation may, subject to the provisions of Section 246, decrease the number of shares in any class that the corporation may issue, or retire any class of shares, but only in pursuance of a change that it has obtained the power to make under this title and only in the following methods;—

(1) By retiring unissued shares;

(2) By acquiring and retiring outstanding shares; or

(3) By requiring all the holders of any class of shares to surrender the shares of such class, and by issuing to each such holder in lieu thereof and in proportion to the number of shares surrendered, cash, property, evidences of indebtedness, a less number of shares of the same class, or shares of another class.

AMENDED CERTIFICATE OF INCORPORATION.

Sec. 223. The Commission shall issue to the corporation an amended certificate of incorporation, if it finds that sections 221

and 222 have been complied with in respect of the change and the amendment.

TIME AMENDMENTS TO ARTICLES OF INCORPORATION TAKE EFFECT.

Sec. 224. Upon the issuance of the amended certificate of incorporation, but not prior thereto, the corporation shall have the power to make any change in respect of which the amendment was adopted. An amendment shall not have any retroactive effect.

Part 3—Corporate Powers

GENERAL POWERS.

Sec. 231. A Federal railroad corporation—

(a) Shall have succession in its corporate name during the existence of the corporation.

(b) May sue and be sued in its corporate name.

(c) May adopt a corporate seal and alter it at pleasure.

(d) May make contracts.

(e) May, in accordance with a plan of reorganization approved by the Commission under paragraph (7) or (8) of section 5 of the Interstate Commerce Act, as amended, and subject to the limitations of this title,—

(1) Acquire, hold, and dispose of the ownership of, or right to operate, railway property or other property of any carrier.

(2) Acquire, hold, dispose of shares, bonds, or other evidences of interest in or indebtedness of any carrier.

(3) Incur debts and issue, acquire, and retire its own bonds or other evidences of indebtedness.

(4) Issue, acquire, and retire or reissue its own shares.

(f) May, whether or not in pursuance of any such plan of reorganization but subject to the limitations of this title,—

(1) Incur debts, and issue, acquire, and retire its own bonds, and other evidences of indebtedness, subject to the provisions, so far as applicable, of section 20a of the Interstate Commerce Act, as amended.

(2) Issue, acquire, and retire or reissue its own shares.

(3) Acquire, in accordance with the plan of consolidation of railway properties, the common use of terminal properties and sections of railway lines that have been omitted from any system so as to be available for the common use of two or more systems.

(g) Shall have power to conduct the business of a common carrier by railroad, and to maintain, manage, and operate its railway property.

(h) Shall have such powers not specifically denied by law or the by-laws of the corporation, as are necessary and incidental to the exercise of the powers specifically granted by law to the corporation.

THE DISPOSITION OF THE PROPERTY WHICH

HAS BEEN IMPROPERLY ACQUIRED

Sec. 232. The provisions of this title shall not be held to affect the right, privilege, power, or immunity of a Federal railroad corporation in respect of any property (including shares, bonds, or other evidences of indebtedness or interest) acquired otherwise than as provided in this part of this title; but the Commission may, after notice and opportunity for hearing in a proceeding instituted upon complaint or upon its own initiative, by order direct the corporation to dispose of such property within such time as the Commission deems just and equitable.

SALE OF ENTIRE ASSETS.

Sec. 233. A Federal railroad corporation may, in accordance with a plan of reorganization approved by the Commission under paragraph (7) or (8) of section 5 of the Interstate Commerce Act, as amended, but not otherwise, sell, lease, or exchange all or substantially all of its assets to any individual, partnership, association, or other corporation. Such sale, lease, or exchange shall be made only if the holders of record of two-thirds of each class of shares vote in favor thereof, whether or not each class has general voting privileges.

RIGHT OF EMINENT DOMAIN.

Sec. 234. A Federal railroad corporation (or other carrier in pursuance of an order issued by the Commission under paragraph (13) of section 5 of the Interstate Commerce Act, as amended), may exercise the power of eminent domain to such extent as is necessary and incidental to the exercise of the other powers specifically granted to the corporation by law or as may be necessary and incidental to compliance with an order issued by the Commission. Jurisdiction of such condemnation proceedings shall be had in the United States District Court for the judicial district in which the property is located.

* * *

Sec. 235. A Federal railroad corporation or other corporation authorized by the Commission under paragraph (9) of section 5 of the Interstate Commerce Act, as amended, to condemn the securities of any carrier, may apply to the United States District Court for the judicial district whereof the holder of any such

security is an inhabitant, for the appointment by the court of three appraisers to determine the value of the securities. If the holder is not an inhabitant of any such district, the application may be made to the Supreme Court of the District of Columbia. The United States District Courts and the Supreme Court of the District of Columbia are hereby given jurisdiction to hear and determine proceedings under this section. Opportunity for hearing and notice of the time and place of the hearing shall be given by the appraisers and the court to the holder of the security in such manner as the court may direct. The award of the appraisers, when filed by the clerk of the court and approved by the court, shall be final and conclusive, and upon payment of the amount of the award, or in case of refusal to receive the amount, then upon depositing it with the clerk of the court, the securities shall be held to be transferred to the corporation and to have become its property.

PRESERVATION OF STATE TAXING POWERS.

Sec. 236. This title shall not be held to exempt the property of any Federal railroad corporation from non-discriminatory taxation by the several States or political subdivisions thereof.

Part 4—Capital Stock

CLASSIFICATION OF SHARES.

* * *

(b) Shares with a par value shall have the par value fixed at \$100 and shall be issued for a consideration not less than the par value. Shares without a par value shall be issued for the consideration fixed by the directors from time to time.

(c) The consideration for shares shall be cash, property, or services. No shares shall be issued by the corporation unless the entire consideration therefor has been received by the corporation.

(d) If shares are issued for property or services, the directors shall file with the Commission a certificate describing the property or services with reasonable definiteness and specifying the value at which received. Shares shall not be issued for property or services, unless the Commission finds and certifies to the corporation that the value at which the property or services are received, is not in excess of the fair value of such property or services.

(e) Except where specifically provided to the contrary, the provisions of this title shall apply equally to all shares of each class, whether issued or reissued either in pursuance of the articles of incorporation or an amendment thereof.

* * *

DIVIDENDS.

Sec. 245. (a) Dividends of a Federal railroad corporation shall be payable only from surplus, after deducting unrealized capital gains, a reasonable allowance for reserves for exhaustion, wear and tear, and obsolescence, and the amount of any premium obtained by the corporation upon the disposition of its shares, or bonds or other evidences of indebtedness.

(b) A dividend may be paid in cash, property, shares that the corporation is authorized to issue, or certificates of indebtedness of the corporation.

(c) A dividend shall be declared only upon the authorization of at least a majority of the directors.

REDUCTION OF ASSETS.

Sec. 246. A corporation organized under this title shall not make a distribution to its shareholders other than by a dividend declared as provided in section 245, or by the acquisition of its own shares in accordance with section 243.

* * *

DIRECTORS.

(b) The permanent directors shall be not less than 15 nor more than 19 in number and shall be elected by the shareholders in accordance with the by-laws of the corporation; (1) except that two of the directors shall be elected, in the same manner as other directors elected by the shareholders, from not less than four nominees, whose nominations shall be made and offered by the employees and subordinate officials of the corporation in such manner as the Commission shall by regulation prescribe; and (2) except that two of the directors shall be appointed by the Commission.

(c) One of the directors elected from the employees and subordinate officials and one of the directors appointed by the Commission shall be upon each committee of the directors. The terms of directors shall be for periods fixed in the by-laws; except that the term of not more than one of the directors elected from the employees and subordinate officials or appointed by the Commission shall expire during any year. The compensation of directors shall be fixed in by-laws approved by the Commission (due regard being had for the time which the

directors respectively give to the service of the corporation), except that the compensation of directors appointed by the Commission shall be fixed by the Commission. The compensation of all its directors shall be paid by the corporation.

* * *

Part 8—Miscellaneous Provisions

PRINCIPAL OFFICE.

Sec. 281. Every corporation organized under this Act shall maintain an office in the United States at the location specified in the articles of incorporation. Such office shall be the principal office of the corporation as specified in its articles of law of the United States.

VENUE OF CIVIL SUITS AND OFFENSES.

Sec. 282. A Federal railroad corporation organized under this title or a special law of the United States shall be held to be an inhabitant and resident, within the meaning of laws of the United States, relating to venue of civil suits and offenses against the United States, of the judicial district in which is located the principal office of the corporation as specified in its articles of incorporation or any amendment thereof, or of the District of Columbia if such principal office is located therein.

LEGAL EFFECT OF ISSUANCE OF CERTIFICATE OF INCORPORATION.

Sec. 283. Except as hereinafter provided in this part of this title, the issuance of the certificate of incorporation shall be conclusive evidence that the corporation has been duly organized, and the issuance of an amended certificate of incorporation shall be conclusive evidence that the amendment was duly adopted and made, notwithstanding a failure to comply with any of the requirements of this Act.

ORDERS OF THE COMMISSION.

Sec. 284. (a) If at any time subsequent to the issuance of the certificate of incorporation, the Commission finds—

(1) That there was a failure by the corporation to comply with any of the requirements of parts 1 and 2 of this title in respect of incorporation or of any amendment to the articles of incorporation, the Commission may order the corporation to comply with such requirements.

(2) That the articles of incorporation, or any amendment thereof, fail to contain any statement required to be stated therein, the Commission may order the corporation so to amend the articles that such statement will be contained therein.

(3) That the articles of incorporation, or any amendment thereof, contain any statement which could not lawfully be included therein if the articles of incorporation or amendment were adopted at such time, the Commission shall order the corporation so to amend the articles that such statement will not be included therein.

(b) Before an order is made under this section, the Commission shall give the corporation reasonable notice and an opportunity to be heard in respect thereof in a proceeding instituted by the Commission upon complaint or upon its own initiative.

(c) An order made under this title shall become final upon issuance.

* * *

SHORT TITLE.

Sec. 292. This act may be cited as the "Railroad Consolidation Act of 1924."

* * *



The Petrograd-Moscow Express Now Arrives on Schedule

New Locomotive Repair Statistics

THE Car Service Division has adopted what is believed to be an improvement over the former method of compiling and presenting the statistics relating to the locomotive repair situation. The improvement applies both to the figures of locomotives held for repairs and to those of locomotives turned out of shops.

As originally compiled, the locomotive equipment condition figures included (a) the number and per cent of locomotives held for repairs requiring over 24 hours, and (b) the number and per cent held for repairs requiring less than 24 hours. In the new method of compilation the figures will be considerably more elaborate and it is to be hoped much more useful. The locomotive held for repairs will be separated according to the class of repairs for which they are held from service. There will be figures shown separately

CS-56
Revised 1-1-1924

AMERICAN RAILWAY ASSOCIATION
CAR SERVICE DIVISION
WASHINGTON, D.C.

RAILROAD.

PERIOD ENDING _____ 192__

SEMI-MONTHLY LOCOMOTIVE EQUIPMENT CONDITION REPORT

		PASSENGER	FREIGHT	SWITCH	TOTAL	ELECTRIC
1. Locomotives on Line						
2. Locomotives Serviceable						
3. Locomotives Stored Serviceable						
4. Locomotives in or Awaiting Shop as of the 1st and 15th of each month and percentage each class to total on line.	Class 1 Class 2 Class 3 Class 4 Class 5 TOTAL CLASS Running GRAND TOTAL	No. \$	No. \$	No. \$	No. \$	
5. Locomotives Condemned Awaiting Dismantling or Sale						
6. Locomotives Turned Out of Shops During Period of Report.	Class 1 Class 2 Class 3 Class 4 Class 5 TOTAL CLASS Running GRAND TOTAL					
7. Locomotives in or Awaiting Shop for Repairs Requiring over 24 Hours.						
8. Locomotives in or Awaiting Shop for Repairs Requiring Under 24 Hours.						

NOTE: Items 2 and 4 should equal Item 1 (Locomotives on Line.)
Item 2 should include figures reported under Item 3.
CONDEMNED LOCOMOTIVES: Not to be included in Items 1 or 4.
Electric locomotives to be shown as a total, not separated as to type.
Report to include Standard Gauge Equipment only; Narrow Gauge to be shown on separate report.
Report to be mailed not later than the 5th and 20th of each month.
Necessary information be shown during the year 1924 on items 7 and 8 for comparative purposes with previous reports.

(OVER)

SIGNATURE.

New Form for Reporting Locomotive Repair Condition

for locomotives held for classified repairs, divided Class 1, Class 2 and so on for the five classes, and also for running repairs. The totals as so divided will give the observer a much more adequate picture of what repair work is required than is at present possible.

The Car Service Division report of repairs completed—locomotives turned out of shops—as originally compiled made no distinction as between light and heavy repairs and the result was to show very high figures for locomotives turned out of shops. On the basis of the figures for the last six months of 1923, for instance, the totals showed that locomotives went through the shop an average of about eight times a year. This was felt by many to be absurd as so stated because of the minor character of much of the running repair work. As of June, 1923, improvement was effected by dividing the figures of locomotives turned out of shop as between light and heavy repairs. By the new method of compilation the division is carried further to show separate figures for

the five groups of classified repairs and for running repairs, thus following the idea worked out as to locomotives held for repairs.

For purposes of comparison with the present figures of locomotives held for repairs, details will be shown of locomotives in or awaiting shop for repairs requiring over 24 hours and for repairs requiring less than 24 hours. Of particular interest also is a new figure of "Locomotives condemned awaiting dismantling or sale," the total of which is not to be included in the total of locomotives on line or in that of locomotives awaiting shop.

The illustration shows the new form CS-56 on which the figures will be reported. The standard classification of repairs is adapted from that of the U. S. R. A. and is given on the reverse side of the form as follows:

STANDARD CLASSIFICATION OF REPAIRS TO LOCOMOTIVES AND TENDERS

CLASS 1—

New boiler or new back end. Flues new or reset.
Tires turned or new.
*General repairs to machinery and tender.

CLASS 2—

New firebox, or one or more shell courses, or roof sheet.
Flues new or reset.
Tires turned or new.
*General repairs to machinery and tender.

CLASS 3—

Flues all new or reset. (Superheater flues may be excepted.)
Necessary repairs to firebox and boiler.
Tires turned or new.
*General repairs to machinery and tender.

CLASS 4—

Flues part or full set.
Light repairs to boiler or firebox.
Tires turned or new.
Necessary repairs to machinery and tender.

CLASS 5—

Tires turned or new.
Necessary repairs to boiler, machinery and tender, including one or more pairs of driving wheel bearings refitted.

*General repairs to machinery will include driving wheels removed, tires turned or changed, journals turned, if necessary, and all driving boxes and rods overhauled and bearings refitted and other repairs necessary for a full term of service.

Running repairs unclassified.

Electric Sand Pipe Heater

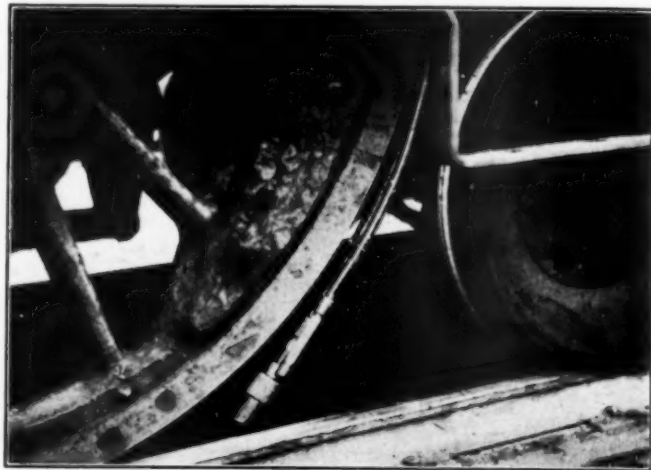
A DEVICE, known as the Universal electric sand pipe heater, designed to keep sand pipes on locomotives and street cars from clogging at the lower end, has been developed by the Universal Electric Sand Pipe Heater Company, 1536 Commercial Trust Building, Philadelphia, Pa.

In stormy weather, the lower end of the sand pipe is always wet, dry sand will not flow from a wet pipe without part of the sand sticking to the side of the pipe, eventually closing the outlet. The function of the device is to keep the orifice dry, and permit a flow of sand at all times.

The heater is a simple device which is screwed on the lower end of the sand pipe and in effect is a shell which surrounds the pipe. Inside of the shell and touching the sand pipe is an electric heating unit connected to the head-light generator. The space between the heating unit and the outer shell is filled with asbestos lagging. Two sizes of heaters are manufactured using 64 and 80 watts respectively and there are two units used on a locomotive.

Laboratory tests on the device were made on an eastern railroad about a year ago. Pipes were set up as on a locomotive with a sand box and valves for sanding track. Water was allowed to trickle down the pipe and a blast of air equivalent to a cross wind blowing at 30 miles an hour was projected against the end of the sand pipe. Sand was allowed to flow down the pipe every 10 seconds. At the end of an hour and 15 minutes, there was no wet sand in the lower end of the sand pipe.

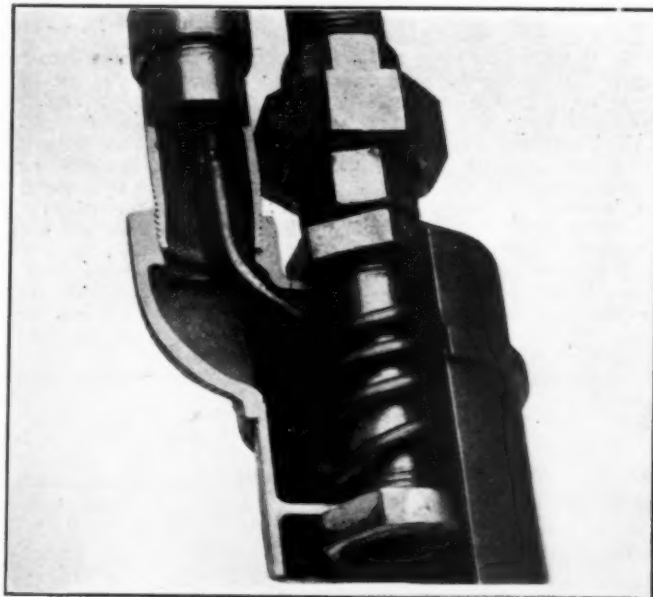
At a later date a road test was made. A five-gallon can of water was placed on the running board of a locomotive and a hose extending down to a point near the lower end of the sand pipe was used to trickle water onto the pipe. In making a 50-mile run without the current turned on,



Electric Sand Pipe Heater Applied to Locomotive

the pipe clogged up five times. On the return trip, the current was turned on and the pipe gathered no wet sand.

Another test was made in the freezing room of the Penn Cress Ice Cream Company at Cresson, Pa. The sander was operated at a temperature of zero, with water trickling



Heater with Section Cut Away and Lagging Removed to Show Construction

on the sand pipe. This was continued for two hours, at the end of which period there was nothing in the pipe.

The device has been in regular use on road locomotives to keep the sand pipes clear under a variety of conditions of bad weather, including low temperature, rain and snow.

THE ALABAMA, TENNESSEE & NORTHERN operating 186 miles of line in Western Alabama, and running two passenger trains a day each day, calls attention to the fact that for the last three years the company has not had to report any violation of the hours-of-labor limits prescribed by the Hours-of-Labor Law, for trainmen and telegraphers.



Arrangement of Lead Tracks to Enginehouse and Coaling Station. Note Well Policed Grounds

England's First Reinforced Concrete Enginehouse

Southern Railway Completes Rectangular Structure of Novel Design at Feltham, England

By D. R. Lamb

Editor, Modern Transport, London, England

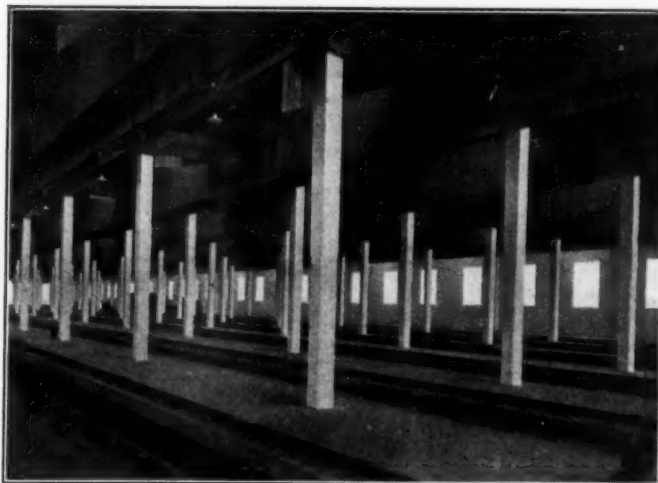
THE SOUTHERN RAILWAY of England has recently completed the construction of an engine terminal at its new Feltham classification yard, the engine house of which is believed to be the first of its kind in Great Britain



The Reinforced Concrete Tank House at the New Feltham Terminal

to be built entirely of reinforced concrete. The Feltham classification yard has been in use since October, 1921, and, pending the erection of an engine house on the site, it has been served for locomotive purposes by the Strawberry Hill engine terminal about 12 miles away, an arrangement which has necessarily resulted in a considerable amount of light running. This will now be avoided, and with the opening of the new engine house all of the work at Strawberry Hill will be transferred, together with the staff, to Feltham.

The yard extends from west to east parallel with the main line. At the west end, adjacent to Feltham station, and under the control of Feltham East signal tower, it commences with a series of eight eastbound receiving tracks, each capable of accommodating trains of from 60 to 70 cars. These tracks converge into one lead passing over the east-



The Smoke Ducts Are Continuous with Smoke Jacks Located at Intervals

bound hump to 14 classification tracks, which connect at their eastern end with a departure yard, which is under the control of Feltham signal tower. In the same way, west-bound trains enter the yard at the eastern end and run into

a series of six receiving yard tracks, next passing over the westbound hump to the westbound classification yard containing 17 tracks, the departure tracks from which are controlled by Feltham East tower. Between the east and westbound yards are located a car repair shop and stock pens. In addition, there is at the western end a further series of eight sub-classification tracks, each capable of holding 30 freight cars, which are used for the classification of trains in station order.

The Engine Terminal

The new locomotive terminal at Feltham is situated at the southeastern extremity of the classification yard. It

Reinforced Concrete Engine House

As already mentioned, in point of construction the engine house is probably the first of its kind in England, as it is built entirely of reinforced concrete on the Hennebique system. The only exposed metal is in the sashes of the side windows; the roof windows, eaves, gutters and rainwater pipes are of reinforced concrete and the only timber used is that in the partitions of the administrative offices. The building is 475 ft. in length and 125 ft. in width, and can be entered by locomotives at either end. The height from rail level to the under-beam of the cross girders is 14 ft. 8 in., and from rail level to under-side of smoke trough 14 ft. 1/2 in. The roof, which is of the saw-tooth type, consists

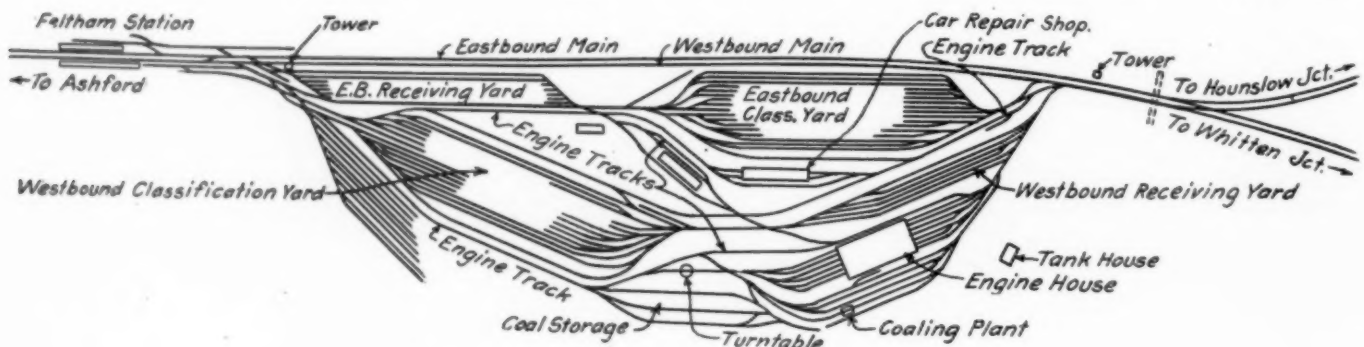
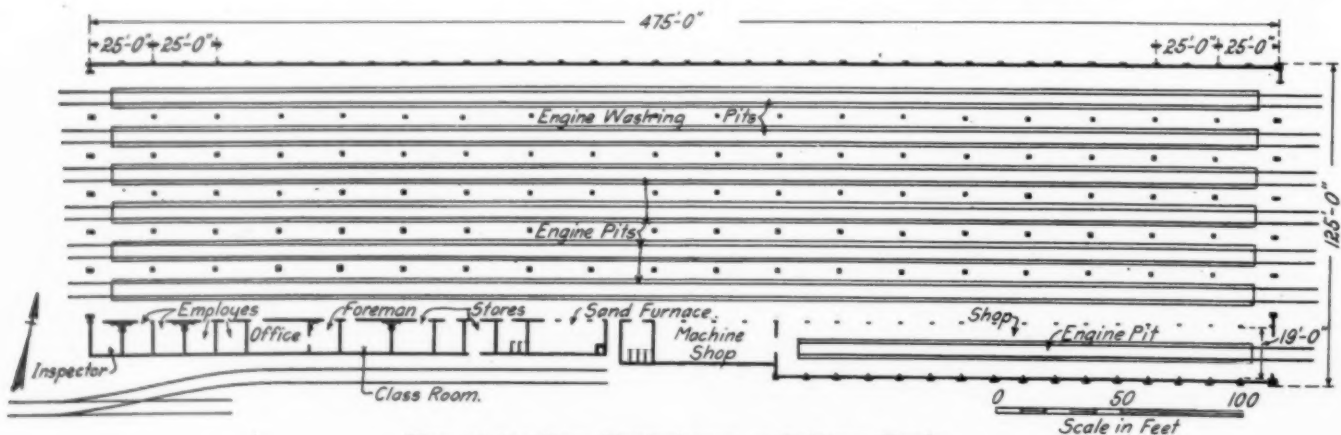


Diagram Plan of the Feltham Classification Yard

comprises an engine house capable of accommodating 42 locomotives, together with a water tank of 120,000 gal. capacity, a mechanical coaling plant with a bunker capacity of 200 tons, an electrically-operated turntable, and coal storage grounds with accommodation for 8,000 tons of coal. From the east end of the yard it is served by a line branching off from the track leading into the westbound receiving yard, while access from the west is by means of an independent engine thoroughfare leaving the main line at Feltham East, and skirting the westbound classification tracks.

of 19 spans, each of 25 ft. The southern portion of each span is of concrete, and the northerly portion of glazing, the north-light principle being followed throughout. The roof glazing bars are of armored concrete. Both walls are liberally equipped with windows; the whole engine house, in fact, is exceptionally well lighted, the interior walls being finished in light-colored distemper. Along the southeast side of the engine house are situated the various offices, lobbies and stores, a noticeable feature of this accommodation being a class-room in which it is proposed to give lectures to



Plan of the New Enginehouse at Feltham Yards

Near the engine house a spur from this track passes over the turntable and then serves the house tracks, and an extra set of terminal tracks south of the engine house, which are to be used for coaling, watering, and cleaning purposes. Access to the terminal may also be obtained by locomotives from the east side of the yard by means of an independent engine track from the eastbound receiving yard, which skirts the stock pens and crosses the hump lead on the west side, connecting with the engine track previously mentioned immediately north of the engine house. With these three methods of access there is no possibility of engines being delayed in passing to the locomotive terminal.

cleaners and junior enginemen on the operation of the locomotive, and also to hold first aid classes. Beyond the office and lobby accommodation is a very light and airy machine shop, 50 ft. in length by 15 ft. in width, equipped with the latest appliances.

The Erecting Shop

Connecting with the machine shop by a sliding door is the erecting shop, 200 ft. in length by 22 ft. in width. This shop, which is equipped with engine pits and catch basins, is 32 ft. 6 in. in height, an allowance which will give ample head room for a 50 ton traveling crane operating on rails

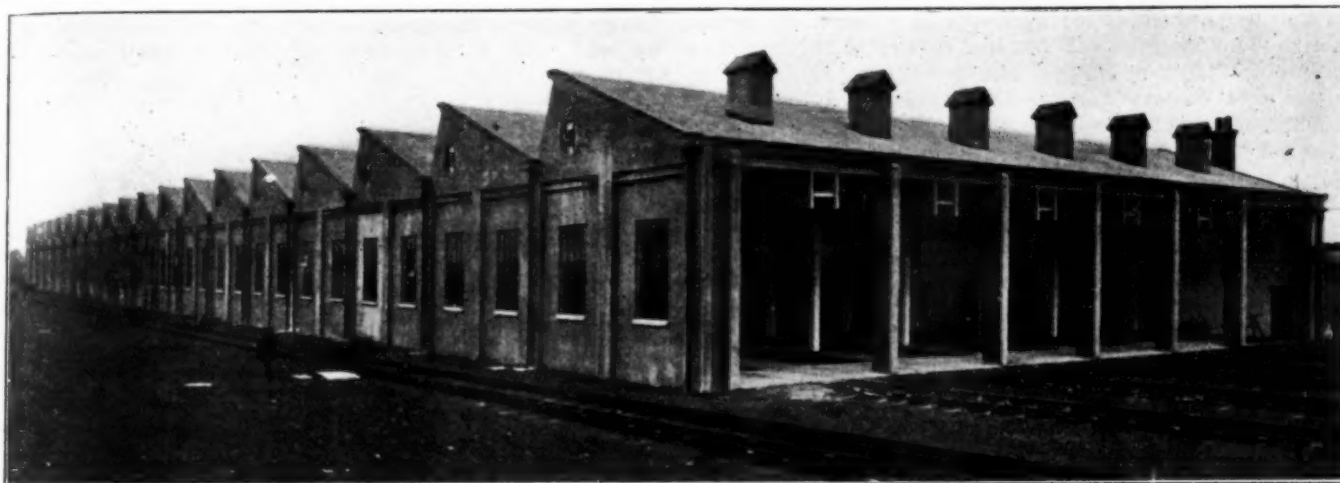
mounted on concrete beams extending the full length of the shop. This traveling crane is designed to lift loads of 50 tons at a speed of 4 ft. per min. and to travel longitudinally at 100 ft. per min., the span being 20 ft. As no cross traveling is necessary, the hoisting gear is mounted direct on the main cross girders.

The engine house contains six stalls, to which there is access at each end, in addition to a short track into the erecting shop. An interesting feature of these stalls is the

engine terminal is exceptionally well provided with water columns, there being three between the tracks at the west end of the engine house, a similar number at its east end, and one placed between the coaling tracks on the south side of the engine house.

The Tank House

The tank house, which is also built entirely of reinforced concrete, presents a very attractive appearance. It measures



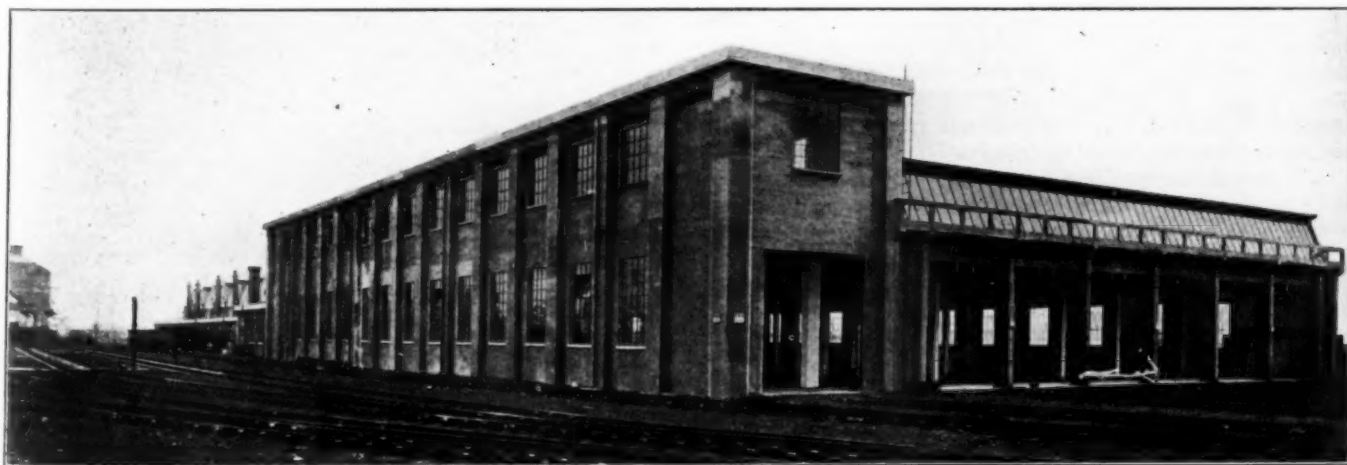
The Exterior and Roof Construction is Well Indicated Here

fact that the rails are carried on chairs attached to longitudinal concrete stringers in place of timber ties, as is generally used for this purpose. The ordinary type of rail and chair is used with spike and trenail fastening. Over each stall, except that in the erecting shop, is a smoke duct with jacks which project through the roof to carry off the smoke; both duct and smokejacks are of concrete.

The first two stalls on one side of the engine house are designed for the use of engines requiring washing out, and are equipped with the usual engine washing pits and catch

basins. Between these two stalls there are 13 hydrants, a number which should prove ample to meet all possible needs for wash-out purposes. The remaining four stalls are intended to be utilized for ordinary oiling and cleaning purposes, although, as they are equipped with 14 hydrants, they can, if necessary, also be used for washing out. The floor of the engine house is of blue brick paving or concrete, the engine pits being of concrete with brindle brick facing and concrete copings. The offices have wood block floors. The

company has had to make provision for the treatment of soil and washing-out water, and a complete filtration system has been introduced. The washing water from the boilers is conveyed through underground ducts into a large tank, 24 ft. long by 12 ft. wide by 14 ft. deep, from which it is pumped and passed through a wood-wool filter, the effluent being discharged into the surface drains. There is, however, a scheme under consideration for using the water over again, but that is more or less in abeyance until such time



The Erection Shop Side of the Structure

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as the company can actually determine the analysis of the filtered water. If it is found to be free from oil or other impurities arrangements will be made to use it again.

The Coaling Plant

The mechanical coaling plant is remarkably compact and occupies a minimum of siding space. Extending practically over three tracks, it is less than twice the length of a coal car, but its height is over 70 ft. It consists of a storage bunker built of reinforced concrete and having a capacity of 200 tons, which is fed by means of a patent car tippler hoist. This machine will lift coal cars from rail level to a height of 40 ft. and will then turn them almost upside down; after their contents have been emptied into the storage bunker, the cars are returned to rail level. It is estimated that the storage bunker can be filled in this manner in about 45 min., the average time taken to supply a locomotive with the requisite amount of coal being 2 min. By an ingenious



Excellent Lighting Has Been Obtained as Is Evidenced by This Photograph

design the storage bunker can deal with two different qualities of coal, and although these are fed through the same opening at the top, they can be discharged at will into locomotives passing on either of two tracks.

The labor involved in taking coal from cars and placing it in the locomotive tenders appears to have been reduced to a minimum. Only one man will be necessary to operate the tippler hoist, and, owing to the capacity of the storage bunker, his services will merely be required during the busiest hours of the day. The only other labor necessary will be one man on each shift to operate the gates, which are placed under the storage bunker. These gates are arranged to measure the coal as it passes to the tender, in this way enabling a record to be kept of the coal consumption. The design of the machine is such that no damage is done to the cars during the hoisting process. The car is lifted in a cradle and tipped by means of an electrically-driven winch, the load being balanced by means of weights running in vertical guides, an arrangement which reduces the power consumption to a minimum. It will be possible to coal four locomotives, providing they are standing back to back, but normally two engines will be coaled simultaneously, the operation occupying but a few minutes.

Electric Turntable

The engine turntable, which is 65 ft. in diameter, will be operated electrically. In this case the use of timber has

been restricted as much as possible, the circle rail being secured to the concrete without the intervention of timber ties. The turntable will be operated from an adjacent cabin, the operator also being responsible for the operation of the main switch giving admission into the tracks on the west side of the terminal. Telephone communication is being provided between the turntable operator's cabin and the engine house foreman's office to regulate the movement of locomotives in and out of the terminal.

These additions to the Feltham hump yard have been designed by A. W. Szlumper, chief engineer of the Southern railway. All of the reinforced concrete work is on the Hennebique system. The construction of the engine house and tank house, together with the reinforced concrete work in the coaling plant, has been carried out by Holloway Brothers, Limited, London. The track and other sections of the work have been carried out by the staff of the Southern railway.

Santa Fe Building New General Offices at Topeka, Kan.

THROUGH the construction of a \$1,600,000 addition to its offices at Topeka, Kan., on which work is now in progress, the Atchison, Topeka & Santa Fe will provide the largest office building devoted exclusively to railroad purposes west of the Mississippi river. The original unit of this building, erected several years ago as an annex to the old office structure, is a modern reinforced concrete structure 10 stories high. The addition on which work is now in



How the Santa Fe Office Building Will Look When It Is Completed

progress involves an addition of more than 200 per cent to the original unit and occupies the site of the old office building which has been demolished to make room for the new structure.

The addition conforms to the architectural treatment of the first unit and will also be of reinforced concrete construction. The entire building, when completed, will have an area of 19,050 ft. on each floor.

Plans for the building provide for the generous allotment of space for recreational and instructional purposes for the benefit of the employees. The entire tenth floor will be devoted to this purpose, providing shower baths, gymnasiums for both men and women, auditorium, etc. It is expected that the structure will be entirely completed by January 1, 1925.

Practical Steps to Improve Railroad Situation*

Readjustment of Rate Structure—Lower Labor Costs and Taxes—Increased Operating Efficiency

By Samuel Rea

President, Pennsylvania Railroad System

OUR NATIONAL transportation system is susceptible of great improvement. We are the most progressive country in the world, and have the most efficient and cheapest transportation service, but it must keep pace with industrial growth if we are to retain our leadership in industry, agriculture, finance and commerce.

Granting this, there are numerous steps which may be taken to achieve that result. If I were to attempt the answer in one sentence, I would say: "Give the railroads adequate net operating income by permitting them to earn, for a sustained period of time, at least a 6 per cent return upon the property devoted to public service in the several districts or groups." Bring that about, and thenceforth there would be some foundation for an improved system of railroads in this country, and also a vastly better prospect for their future development and continued progress than has existed for more than a decade and a half.

First and last the problem is one of railroad credit, which can have only one sound basis; that is, the ability to earn a sufficient margin over all expenses and taxes—averaging the good years with the bad. It must be sufficient to attract capital investment on a large scale at reasonable cost, by assuring reasonable safety of principal, with the prospect of paying satisfactory income upon the capital used, and leave some margin of surplus to aid in sustaining credit or make improvements.

If the railroads earn a return of only 5 per cent upon their property investment in such a year as 1923, with its record-breaking traffic, how can they be expected to sustain their earning power in other years with lessened traffic? The answer is that they should be allowed to earn either a minimum of 6 per cent in all years or else greater returns in years of general prosperity, in order to build up a surplus to tide them over the years of lighter traffic which are certain to come. It will be immediately asked, "What specific measures can be taken by which greater net operating income can be secured by the railroads?" As I view the matter, four possible methods suggest themselves:

1. Readjustment of the rate structure to yield larger revenues.
2. Lowering of labor costs.
3. Reduction in taxes.
4. Greater efficiency in operation.

Readjustment of Rates

As to the first suggestion, that affecting rates, there is no one in or out of the railroads bold enough to advocate horizontal advances, although the railroads are not earning a 6 per cent return. The committee of the Chamber of Commerce of the United States on "Readjustment of Relative Freight Rate Schedules," which considered this subject carefully, went so far as to recommend a general readjustment and revision of the structure of freight rates, having for its purpose a more equitable distribution of rates in accordance with the commercial ability of various classes of traffic to bear those charges. This process is a very necessary one to undertake. It is sound economically and commercially.

It will have to be done sooner or later, but it will be unavoidably slow. Adjustments are going on all the time, but unfortunately most of them are downward. Meanwhile, some of the agricultural interests are demanding immediate reductions in their rates; and are insisting upon them regardless of consequences to the railroads, to other classes of shippers or to the nation as a whole. Some years will be required to make a revision or readjustment of our entire rate structure, and while in the end we may expect from this work an improvement in railroad net earnings, together with relief to certain kinds of traffic now probably bearing more than its fair share of the burden, no beneficial results, either to the carriers or to shippers, can be expected in the immediate future. That does not mean that we should approach the work of revision in any faint-hearted manner, but tangible results will not be obtained for some time, and for the present we shall have to look elsewhere for practical methods to increase railroad net operating revenues.

We know that it is impossible to produce adequate transportation for the United States upon returns which for 1923 will only reach approximately 5 per cent, and that year was the greatest we have ever had, judged by the railroads' loaded car movements and the general prosperity of our people.

Therefore, I sum up this first suggestion by pointing out that whatever may be the defects of the Transportation Act, and no matter how earnestly some people may advocate the revocation of the rate-making provision that rates must be made not to exceed a fair return, fixed at $5\frac{3}{4}$ per cent (which is not a guarantee, but a restriction), the wisest course of all is to frankly admit that such provision has never been enforced since the act was passed. Yet it was incorporated as one of the chief foundations for providing the American people with adequate transportation through increasing the net earnings and improving the credit of the railroads. We railroad men, business men and commissions have not yet kept faith with the American people because we have never insisted upon the enforcement of that provision, which is vital to the whole act and the health of the railroad service. Therefore, our present form of public regulation has not yet proven its ability to provide the railroads with a fair or adequate return.

Reducing Labor Costs

The second suggested method for improving the net operating revenue is that of lower labor costs. An analysis will show that by far the greatest percentage of increased revenues in the last 10 years has gone to pay higher wages to railroad employees to keep pace with the higher wages paid by the profitable industries. The railroads want to have nothing but well paid and satisfied employees up to the limit of their ability to pay them without injury to the service or property. Here we must make an appeal much broader than to railroad managements and investors. We must specifically appeal to labor itself to have its leaders enlarge their vision to assure continued prosperity and obtain public confidence. There must be a change on the part of leaders who can see no other policy than that of demanding increased wages and no changes in working conditions. Some of them are specifically committed to the

*Part of an address before the Chamber of Commerce of the United States of America, Eastern Division, Philadelphia, Pa., January 17, 1924.

un-American principle of the closed shop. Others advocate, or at least countenance, the totally uneconomic practices of restriction of production and the sympathetic strike. Still others, while professing to advocate increased production, do so only upon condition that it shall be under their dominance and direction. We are all part of a big family, tied together for better or worse, and the members of the family must be united and friendly to assure their own work and payroll. Railroad capital, as well as labor, must have its payroll, or it will not be forthcoming to furnish employment at good wages.

There should also be a change from the labor policy which, at the close of the war, took the stand that wartime wages were going to hold permanently, and, if possible, exact still higher rates of pay, and offer no greater production. Railroad labor leaders must be far-sighted enough to take the position that the employees who receive about 50 cents of every dollar of railroad revenues, should co-operate with the rest of the country in bringing about needed deflation in living costs and materials, and should advocate and lend genuine assistance to a policy of increased production. That practical policy would put them in the strongest possible position before the American public. However, if they continue to have no constructive program and reject all advice and suggestions except those coming from within their own circle, they are doomed to public distrust, and, in addition, the co-operative and harmonious relationship which should exist generally between employer and employee will be far from realization.

The problem of increasing personal efficiency among railroad working forces may be regarded as lying chiefly in creating a renewed and strengthened sense of loyalty on the part of the individual worker to his job and to the enterprise by which he gains his support. This particular labor problem, as it exists in its present form, is largely an inheritance from the period of government operation. It is associated with the policy of adjusting wages and working conditions for war purposes and political ends, which prevailed during that era and the period immediately preceding it. It reflects also other policies of government control which resulted in forcing large bodies of railroad workers under the sway of those labor organizations which practice or countenance the uneconomic and indefensible principles I have just named—the sympathetic strike, restricted output, and the closed shop.

That has been one of our chief problems in the last four years. We are meeting it on the Pennsylvania Railroad, with a most encouraging degree of success, by our plan of employee representation. Essentially it is a system of collective bargaining within our own ranks—a plan by which our officers and men get together face-to-face to avoid or settle, in peaceful conference, difficulties which may arise respecting wages, discipline, working conditions and similar matters.

It recognizes the right of the worker to a voice in determining questions affecting his own conditions of employment. It not only recognizes the general principles of collective bargaining, but, as I have stated, is in itself a working system of collective bargaining, which simply means dealing through chosen representatives instead of individually with each employee. It seeks to avoid controversies and to assure employment, and at fair pay. It is in no sense anti-union, the truth of which statement is evident from the fact that in many cases the representatives elected under it continue to hold their union affiliations. No man on the Pennsylvania Railroad holds or loses a job because of union affiliation or non-affiliation.

The plan has the whole-hearted support of an overwhelming majority of our employees expressed in the results of elections held under secret ballot. It is working with greater success every day, because, as we believe, it is

based upon fundamentally sound principles. Sometime we hope to see the power and influence of the government exerted toward helping instead of hindering the functioning of this obviously American plan of settling differences peacefully and by mutual conference. A vast forward impetus would thereby be given to restoring and further strengthening the feeling of loyalty on the part of railroad workers, not only on the Pennsylvania, but on other lines as well.

In this connection I may say that as matters now stand, increased efficiency on the part of the individual worker, which may be interpreted as loyal service with a greater output for every employee, holds much brighter hope for increased efficiency of railroad operation than lies in any possible general revision of wage scales now in sight. Such increased output means no impairment whatever of our American standards of living, which I am proud to know are the highest of all time and of any nation.

Reduction of Taxes

The third avenue suggested for improving the net operating revenue of the railroads is through a reduction in taxes. Mitigation of our tax burdens is a very popular subject just now. As a citizen, of course, I heartily approve of Secretary Mellon's plan, yet there is little, if any, direct relief in it for the railroads, save what may be derived through the encouragement of government economies and larger amounts of income, which citizens may be induced to invest in railroads. Railway taxes have been mounting dangerously for a long time. In recent years the rate of increase has reached the point where it can be considered alarming, as taxes are making serious inroads into the narrow margin of profits over and above operating costs which are left to the carriers. For instance, the tax bill of the Class I railroads in 1913 was \$118,000,000, while in that year the companies were able to pay to their stockholders in dividends \$322,000,000. In 1922 the railway tax bill had increased to \$301,000,000, while the dividends paid to stockholders fell to \$271,500,000. In other words, in the course of 10 years the burden of the taxes which the railroads must bear increased 150 per cent while the returns paid to their stockholders decreased 16 per cent in spite of an enormously increased volume of service rendered and billions of additional capital invested in the properties.

The excessive taxes now borne by our railroads are, of course, only one phase, though a very important one, of a nation-wide condition. They afford a startling reflection of the extravagance in the conduct of our federal, state and municipal affairs, and the stupendous cost of carrying on government and governmental projects in this country, largely encouraged by the issuance of tax free securities.

Relief must lie in a general understanding of the situation, and the voicing of an effective demand for a remedy. The farmer is beginning to realize, as the business man has long done, that tax payments are consuming an ever increasing proportion of his income, increasing his expenses, cutting down his revenues, and so threatening his standards of living. If the agricultural interests succeed in getting as much publicity and Congressional support, in favor of reduced taxes, as they have gotten for lower freight rates on some of their own traffic, I feel that we cannot be far from the peak of taxation, and that relief is in sight.

Municipal, state and federal governments alike must be brought to the realization that economy and business judgment in governmental administration and expenditures can save the country far more in actual cash than any possible reduction in railroad charges, and are just as essential for the welfare and stability of the nation as an efficient transportation machine or a prosperous and contented farming constituency.

A more equitable method of assessing taxes upon the railroads than now prevails would be to base them with relation to the amount of their earnings and net return. Railroads are already taxed through restrictions as to the rates they can charge for the transportation service, through fixing the wages and working conditions they must meet, and in many other directions that result in minimum returns. In addition there is the recapture provision of the Transportation Act. If railroads are to be taxed like other corporations, then all of these limitations on rates, wages and profits should be eliminated. That being impossible we must look to an equitable taxation basis, so that the power of taxation shall not become synonymous with the power to destroy railroad credit. Under such a gross-net tax basis, the federal and state governments, which receive the taxes, would share equitably both in the prosperity and adversity of the railroad systems, and the latter would find their burden automatically adjusted more nearly in accordance with their capacity to bear it.

At present the railroads pay taxes under many different bases, such as capital stock tax, franchise tax, gross receipts tax, income tax, loans tax, as well as real estate taxes and various documentary taxes, affecting consolidation, merger, security issues, etc.

An equitable taxation basis would have the additional advantage of doing away with the present multiplicity of confusing and onerous taxing methods.

To sum up, why charge an income tax to railroads that are by federal law confined to 6 per cent when a 50 per cent recapture provision is applied, and in all but a few cases they cannot earn anything like 6 per cent on their property investment because of governmental restrictions as to earnings, wages, and net results? It is surely unfair that the transportation industry should be compelled to face a diminishing net return, with an ever-increasing tax burden. What is the ultimate result of such an unjust system? It tends to force the closing down of many branches or weak lines where the earnings do not exist to sustain them, and it adds to the cost and difficulties of obtaining new capital.

In the same category with reduced taxation we may also consider the justice of reducing the interest charged by the government on loans made to the railroad companies, chiefly for capital expenditures imposed upon them during the inflated war period when the government not only monopolized the money markets, but controlled the railroads and ordered the expenditures. The railroads are continuing to pay 6 per cent on these loans, a rate higher than the average which the government pays for its own borrowed moneys; hence the government is making a profit of probably $1\frac{1}{2}$ per cent from the railroads on these loans, while the roads are struggling to perform a great national service.

Increasing Efficiency of Operation

A fourth method suggested for increasing the net returns of the railroads is greater efficiency in operations. This must be considered under two subdivisions:

1. More efficient use of existing facilities.
2. Extensions of or additions to physical facilities, and the character which they should take.

These two questions, though related, are not identical, and I should like to consider them separately.

More efficient use of the existing physical facilities of the railroads involves many considerations. It will be understood that I have in mind such forms of enhanced efficiency as may be counted upon to produce improved net returns. Perhaps we shall have to take a more undisguisedly commercial view of the railroad enterprise than now generally prevails. The railroads are performing services in many directions which are not only unremunerative,

in the sense of contributing nothing toward a return on the property, but in many cases result in actual out-of-pocket losses. Passenger trains are being kept in operation where, owing to changed conditions, the net receipts have fallen to extremely low figures or do not exist at all.

There are many branch lines on the Pennsylvania, and other roads throughout the country, which contribute nothing to the support of the systems as a whole, but are serious and increasing burdens. In other forms of enterprise, no less important to the social structure than the railroads, it is not expected that undertakings shall be indefinitely continued after changing circumstances have rendered them unremunerative. It is hard to see why a different criterion should be applied to the enterprise of railroading. We may well ask whether the test for justifying the continued operation of a particular service should not be its ability to pay its way, including the earning of taxes and of a fair proportionate contribution to the return on property investment.

I do not mean to imply that the necessity for railroad service is shrinking. Demands for transportation service in the last year have been the greatest ever known in peace times, and I have no doubt that even these high records will be surpassed in the next period of general business activity.

The railroads are, however, transportation machines which are becoming increasingly adapted to the rendering of service in bulk. We may regard them as the mass, or wholesale, carriers of the nation. As their equipment, yards, terminals and other facilities become increasingly adapted to this purpose, they become less adapted to the retail forms of transportation—such as short-haul traffic and less-than-carload freight, and the shorter distance light passenger service.

These forms of service in some cases are a positive burden to the railroads. They are essentially the forms of service which motor vehicles or rapid transit lines can perform to the greatest advantage, owing to their greater flexibility of movement. We are, therefore, confronted with the question of the desirability of encouraging the further transfer to motor trucks and passenger motor vehicles of considerable portions of these kinds of traffic.

We have also to consider the advisability of the abandonment of totally unremunerative branch lines where public patronage has been transferred chiefly to motor cars, and the highways. It seems not unreasonable to say that, either in the case of freight or passengers, when patronage becomes too thinly spread by reason of being divided, the public should be called upon to say which kind of service is desired. Where there is a marked preponderance of choice in favor of the highways and motor vehicles, the railroads should be allowed discretion to abandon the field altogether, so as to concentrate their facilities in other directions, and thus serve a greater demand.

This subject is also intimately allied with the question of the revision of the rate structure. Permitting the railroads to raise rates on those forms of merchandise or other products which do not now pay their proper share, as measured by their value and the cost of handling, would permit a corresponding lowering of rates on certain primary commodities which are less able to bear the burden. It would also probably have the effect of giving further impetus to the shifting of high-class, small-lot, short-haul merchandise traffic into the motor truck field.

This clearing away of unremunerative traffic, for which other and better adapted agencies are now available, instead of reducing the scope of railroad operations, would leave room for a vast increase. It would clear terminals for the long-distance traffic which the railroads can handle with incomparably greater efficiency than any form of motor vehicle, and which is certain of continued growth. It

would prolong the life of existing terminals, and so help solve the extremely serious problem of providing more terminal room in our great cities, where realty values are becoming increasingly prohibitive. It would simplify railroad operation, and, by increasing the percentage of heavy tonnage movement, would also tend to increase materially the ton-miles and passenger-miles which a given working force would be capable of handling in a given period of time.

Although no definite program for meeting these problems is yet fully developed, they nevertheless deserve the most intelligent consideration by both the public and the railroad companies, and also by the interests engaged in manufacturing motor vehicles and all others concerned in commercial motor transportation.

Financial Difficulties of Increasing

Operating Efficiency

The related question of increased or additional physical facilities, and the character which they should take to improve efficiency and to lay the foundations for cheapening the cost of transportation, brings us immediately back to that most fundamental of all railroad problems—the restoration and stabilizing of credit. Until that problem is assured of solution, no practical program for the sustained betterment or improvement of railroad facilities on any substantial scale, is capable of formulation.

Honorable A. W. Mellon, Secretary of the Treasury, recently stated:—"There is one unsatisfactory feature about the large capital outlays among the railroads in the past year, and that is that they have been almost wholly provided by borrowing and are represented by bond issues. It is evident that the railroads cannot be permanently financed in this manner. Unless a proportion of the new capital is provided in the form of proprietary investments the credit of the companies will suffer, interest rates upon their offerings will have to be advanced, and in the end further borrowing will become impracticable."

From an engineering viewpoint there are many improvements which could be adopted, or the present use of which could be greatly extended, and which would very materially increase the efficiency and reduce the cost of railroad operation. The initial installations, however, would require the investment of very large sums of money, and it is difficult to see how these sums can be raised unless railroads are allowed to earn such fair returns that investors can be persuaded that they can receive at least as good a return, with as high a degree of security, as they know can be obtained in the industrial, mining, real estate, mercantile and other competing investment fields. Likewise, they should feel secure from punitive political attacks or legislation directed against the railroads.

Electrification of the railroads can be regarded as only in its infancy. Lack of funds has been the chief bar to progress for many years, and is today. Electrification promises great operating economies in many directions; and where adopted for built up territories, affords a great flexibility of service, such as tends to offset, to some extent at least, some of the difficulties in handling the short-haul and lighter forms of traffic to which I have just referred.

Experiments will continue with gasoline rail motor cars; grade crossing elimination must proceed; automatic signal crossing protection, and extension of block signals, and train control devices, to enhance safety in general, must also be provided.

Without considering these demands for additional safety devices, or the requirements for maturing securities, this chamber has estimated that railroads require about \$787,000,000 per annum to meet the expected traffic growth.

I have now stated my general views upon four possible avenues of approach to a more satisfactorily sustained level

of net earnings, having for its object the improvement of railroad credit as a basis for a sustained program of railroad progress.

It is interesting to see just where we stand in this matter of net operating revenue. In 1917, the year we entered the World War, the net operating revenue of all Class I railroads was \$934,000,000. For the year 1923, based upon 10 months' actual return, with the other two months estimated, it will probably be in the neighborhood of \$970,000,000. In the meantime the huge sum of three and a quarter billions of dollars has been expended upon the railroads for additions to road and equipment. It will, therefore, be seen that the investment of that immense sum has brought practically no increase in net operating revenues, even in a year during which railroad traffic broke all previous records, and the general prosperity and spending power of the country were at the highest levels ever known.

That is not an encouraging situation upon which to base the raising of large sums of fresh capital for improvements. Nevertheless, still having faith in the fairness of the American people, and their ultimate appreciation of an adequate transportation system, and relying upon a continuance of the underlying policy of the Transportation Act, to the effect that railroad investment will be protected, the railroads spent another billion in 1923, for more equipment and improvements, and have committed themselves to the expenditure of further large sums for such purposes in the present year.

By these enormous expenditures, for which practically all of the capital has been borrowed on mortgages and other indebtedness, the railroads are attesting their belief in the future of the country. But, if we are to go much further, it is absolutely essential to get some tangible encouragement from the public and our governmental bodies indicative of their appreciation for, and their intention to properly support, an improved national transportation system. The railroads must not be made a football for partisan politics. Adequate net operating revenue is the one thing which will furnish the credit upon which such further sustained program of improvements must rest. It must be possible to show adequate net earnings not only in exceptional traffic years, such as 1923, but over a continued period. Without these factors there can be no permanent solution of the problem of railroad credit, which is at bottom the basic problem in improving our national transportation system.



A 22-Ton Coal Car in Czechoslovakia

Benefit of Employee Ownership of Securities

DURING THE LATTER part of 1923 The Pennsylvania News for the eastern region of the Pennsylvania Railroad announced a competition open to the employees of that region for the best essay on "The benefits of Employee Ownership of the Stock and Securities of the Pennsylvania Railroad Purchased Through the Employees' Provident and Loan Association." Similar contests were also conducted in the other regions. The essay was limited to 500 words and the first prize was two shares of Pennsylvania Railroad stock. John A. Wickenhaver, chief clerk to the superintendent of the Philadelphia division, with headquarters at Harrisburg, Pa., was awarded the first prize for the eastern region. Mr. Wickenhaver's contribution follows:

Ownership of Pennsylvania Railroad securities by Pennsylvania Railroad employees benefits the employees, their families and the company. The Employees' Provident and Loan Association provides effective and convenient methods by which such benefits may be obtained.

Employees and their families benefit, first, through the acquirement of security and contentment. A man who has provided for himself and his family against a time of need feels secure. He is conscious of a duty performed and is at peace with his soul. His securities work for him. Purchasing 10 shares of stock is equivalent to increasing his salary \$2.50 per month. The possession of such securities and steady income brings a feeling of comfort with the priceless blessing of contentment.

They benefit, secondly, from increased self-respect. A man is more highly regarded in his community when it is known that he is the owner of property. His neighbors then regard him as a substantial citizen and more readily respect his judgment. Cashing of dividend checks gives one a better standing at his bank. This respect of others increases his self-respect and makes life more agreeable to him.

They benefit, thirdly, through enlarged interests. Ownership of such securities stimulates interest in conditions affecting them. The owner becomes interested in business and financial news. The big political and business movements of our country become vital to him. As his interest and knowledge increase he becomes a more interesting man and talks about other things than his job and family.

The company is benefited by, first, the increased interest and improved morale of its employees. Employees give more thought and effort to their business when they become partners in the enterprise. This greater diligence means better service to the public and increased efficiency with resultant economy. Interests of men and management will harmonize more heartily and an increased force of public opinion, augmented by thousands of new partners in the enterprise, will assist in creating a fairer attitude towards this great transportation servant of the public. Each step taken by the management or by the men toward more complete co-operation and friendly interest, encourages a similar step from the other side. Suspicion disappears and an era of good feeling becomes a reality.

Employees owning securities are business men. They will defend and protect their property which will be a bulwark of strength to the company.

Now, how may these benefits be obtained?

Every great work must have system or routine. System or routine is a specialized way of doing a work too difficult or exacting to be done haphazardly. Thrift requires stimulation and regular application. The Employees' Provident and Loan Association provides this system. It takes our money before we get it, saving us the pain of parting with it. We need not go to some distant bank or business house—or

send a money order to make payments. The work is done effectively and conveniently for us and in due time these painless savings come back to us in the form of securities.

Freight Car Loading

WASHINGTON, D. C.

LOADING of revenue freight for the week ended January 19 totaled 895,276 cars, according to reports filed by the carriers with the Car Service Division of the American Railway Association. This was an increase of 23,011 cars over the preceding week and was the largest number of cars ever loaded during any one week in January on record. Compared with the corresponding week last year it was an increase of 30,979 cars and with the corresponding week in 1922 it was an increase of 164,167 cars. It also was an increase of 186,618 cars over the corresponding week in 1921 and an increase of 90,410 cars over that in 1920.

The gain over the preceding week this year was due largely to an increase in the loading of merchandise and miscellaneous freight and also in grain and grain products and forest products. There also were increases in the loading of coke and ore. Coal and live stock, however, showed decreases. Loading of miscellaneous freight for the week of January 19 totaled 288,730 cars, an increase of 14,237 over the week before and an increase of 3,333 cars over the same week last year. Compared with the same week in 1922, it was an increase of 77,940 cars. Loading of merchandise and less than carload lot freight amounted to a total of 224,309 cars.

Shipments of grain and grain products for the week totaled 47,444 cars. While this was an increase of 3,058 cars over the preceding week it was a decrease of 815 cars under last year and a decrease of 4,771 cars under two years ago. Coal loading totaled 204,694 cars, 6,404 cars below the week before. Compared with the corresponding week in 1923, it was an increase of 11,916 cars and with the corresponding week in 1922 it was an increase of 42,575 cars.

Increases over the week before were reported in all except the Southwestern while all reported increases over the same week last year except the Northwestern. Comparisons showed increases in all districts, however, over the same week in 1922.

The summary of the Car Service Division report is as follows:

REVENUE FREIGHT CAR LOADING—WEEK ENDED SATURDAY, JANUARY 19, 1924

Districts:	1924	1923	1922
Eastern	219,216	197,665	177,332
Allegheny	181,828	181,770	146,452
Poconos	40,902	34,461	30,983
Southern	139,045	138,503	111,954
Northwestern	111,425	114,659	96,827
Central Western	143,394	140,473	112,900
Southwestern	59,466	56,766	54,661
Total Western districts.....	314,285	311,898	264,388
Commodities:			
Grain and grain products.....	47,444	48,259	52,215
Live stock	37,748	33,201	31,810
Coal	204,694	192,778	162,119
Coke	12,162	13,818	7,269
Forest products	71,467	69,913	49,992
Ore	8,722	10,149	4,303
Mdse., L.C.L.	224,309	210,782	212,611
Miscellaneous	288,730	285,397	210,790
Total	895,276	864,297	731,109
January 12	872,265	872,908	714,191
January 5	703,269	767,296	599,433
December 29	615,431	704,224
December 22	877,257	826,312
Cumulative loading to date.....	2,470,810	2,504,501	2,044,733

Due to the increased demand for transportation, a decrease in the number of surplus freight cars was shown in reports for the week ended January 14 when the average was 292,921, a decrease of 60,869 cars compared with the number on January 7. Surplus box cars totaled 132,564, while the number of surplus coal cars amounted to 129,846.

Plans Procurement of Engineer Material for War Purposes

GENERAL LANSING H. BEACH, Chief of Engineers, U. S. Army, has announced plans for the procurement of engineer material for war purposes, now rapidly being developed by the Corps of Engineers, which it is believed, will materially lessen the confusion incident to the securing of engineer supplies during any future emergency in which the United States may find itself involved.

During the late war the Corps of Engineers was called upon to furnish transportation for supplies and troops in the theater of operations, build piers for the rapid unloading of ocean steamships, erect saw mills, develop searchlights, sound ranging apparatus, water purification units, camouflage equipment, and countless other specialized duties.

The Assistant Secretary of War, who is charged with the supervision of all war procurement activities of the Army, has instructed the various supply branches of the Army to prepare adequate plans that can be woven together into a general plan of industrial mobilization. For the purpose of procurement of supplies for the Corps of Engineers the United States has been divided into six industrial districts with headquarters at each of the following cities: Schenectady, N. Y.; New York City; Philadelphia; Pittsburgh; Chicago, and San Francisco. It is the intent of the plans that an organization of Engineer reserve officers be developed in each of these districts with entire responsibility for the procurement of necessary material and supplies used by the Corps of Engineers that are produced within the territorial limits of the district. A central organization located in the office of the Chief of Engineers will co-ordinate and control the activities of these various procurement districts.

The following Engineer officers now on duty in the cities mentioned above have been designated in charge of peace time activities:

Captain George W. Gillette, Engineer Supply Officer, Schenectady General Reserve Depot, Schenectady, N. Y.
 Lieut. Colonel J. R. Slattery, District Engineer, 1st District, U. S. Engineer Office, New York, N. Y.
 Colonel F. C. Boggs, District Engineer, U. S. Engineer Office, Philadelphia, Pa.
 Major E. L. Daley, District Engineer, U. S. Engineer Office, Pittsburgh, Pa.
 Major J. H. Carruth, Engineer, 6th Corps Area, Chicago, Ill.
 Major U. S. Grant, 3d District Engineer, U. S. Engineer Office, 2d District, San Francisco, Cal.

The central organization with headquarters in Washington is under the supervision of the Chief of Engineers, U. S. Army. Major H. J. Wild, Chief of the Supply Section, Office, Chief of Engineers, Washington, D. C., is in direct charge of the activities of the central organization. Aside from functioning in administrative affairs the central organization will operate in an advisory capacity and will also coordinate the activities of the various district organizations.

An Engineering and Development Branch consisting principally of scientists and engineers is embodied in the plans for the central organization. This branch will contain men trained in mechanical, civil, electrical, mining and chemical engineering.

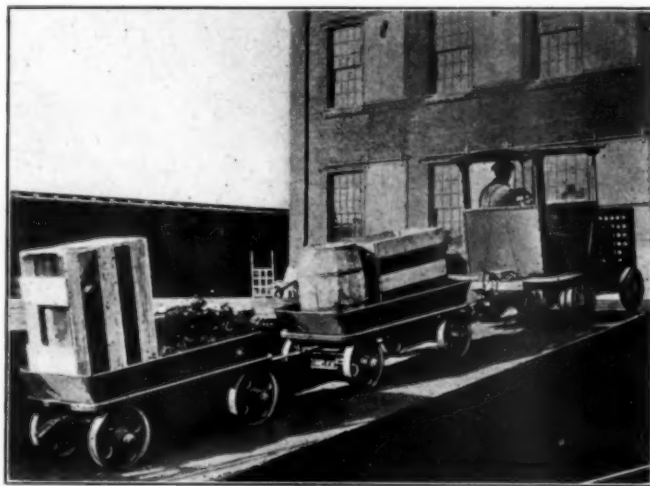
The Corps of Engineers realizes the incalculable assistance rendered by American scientists and reserve officers during the late war and it is hoped that the present plans may serve to keep alive the friendly co-operation of these men with the War Department.

THE APPLE CROP of Canada for 1923 is estimated by the government statistician at 10,800,000 boxes, which, at an estimated average of two dollars a box makes the value over \$21,000,000. By provinces the estimated production was as follows: Nova Scotia, 5,250,000 boxes; British Columbia, 3,124,000; Ontario, 2,275,000; Quebec, 110,000, and New Brunswick, 35,000.

Gasoline-Driven Tractor for Railroad Use

A GASOLINE-DRIVEN TRACTOR, built to stand the rough usage and service to which such a machine is generally subjected in the handling of freight, merchandise and baggage on warehouse, freight station and depot platforms, has been developed by the Omaha Steel Works, Omaha, Neb. This tractor is also well adapted to the transportation of materials, parts and tools in and about store rooms, back shops and enginehouses. The design and shape of the tractor platform can be varied to suit conditions, or a box body can be furnished when desired.

The power plant in the new tractor, which is called the Omsteel, is a Ford motor and transmission mounted on its own frame inside of and under the main frame of the tractor. This feature and the arrangement of axles and springs provides a double three-point suspension. A suitable pump is designed to assure positive water circulation. A Ford torque tube, drive shaft and rear axle are used for the drive, hardened, finished roller chains operating on cut steel



The Gasoline Tractor in Use

sprockets, connecting the Ford driving unit and the rear wheels of the tractor. Radius rods provide for play of the springs and permit ample chain adjustment. A heavy, well braced steel plate and angle fender and bumper on the front of the tractor makes it possible to use the tractor for pushing as well as pulling.

The steel coupler is bell-mouthed and can be operated by the driver enabling him to couple or uncouple trailers from his position. The coupler is built for the standard Omsteel trailer equipment but can also be made to meet any required specifications.

In the trailer design the four wheels are mounted on steering knuckles connected to the drawbar so that the steering is accomplished by all four wheels. The wheels run on roller bearings, thereby greatly increasing the number of trailers which can be handled by one tractor. The trailers are relatively light in weight and can be shifted by hand.

HASSAN MOHAMMED EL KABANNIA of Cairo, Egypt, has arrived in San Francisco to begin serving an apprenticeship in the motive power department of the Southern Pacific. He is 24 years old and is one of five young Egyptians sent to this country by the Egyptian government to learn of American industrial progress. The other Egyptian students will endeavor to master telephone engineering, telegraphy, marine engineering and mechanical drafting from American concerns.

General News Department

The Freight Claim Division of the American Railway Association will hold its annual meeting at the Hotel Roosevelt, New Orleans, La., on April 13.

A southbound express train of the Pennsylvania Railroad was derailed at St. George, 22 miles south of Franklin, Pa., on January 30 and the engineman, fireman and a porter were killed. The locomotive fell down a bank and a sleeping car was overturned; and 11 passengers were injured, most of them not seriously.

The Supreme Court of Illinois, which is to begin its February term on next Tuesday will take up the case involving the sale of the Chicago, Peoria & St. Louis and will probably render its decision at the end of the February term. The sale of the railway has been postponed until February 16, pending the action of the court on a writ of error, asking review of the foreclosure decree of the Sangamon county circuit court.

Central Railway Club Meeting

A meeting of the Central Railway Club will be held at the Hotel Statler, Buffalo, N. Y., on Thursday evening, February 14, at 8:00 p. m. The Committee on Rules of Interchange will make a report in which a number of recommendations will be offered for changes in rules.

Radio on the C. N. R.

The Canadian National plans to establish radio broadcasting stations along its lines from which officers of the road will talk to the employees every day on matters concerning the operation of the road. The employees are to be aided in equipping their homes with receiving sets. Sir Henry Thornton, president of the company, plans to speak by radio at least once a week.

Western Engineers Discuss Movable Bridges

Movable bridges was the subject of a symposium presented at the meeting of the Western Society of Engineers at Chicago on the evening of January 28. Five different types of bascule bridges and the vertical lift type were discussed as to the principles involved and the practical considerations imposed in their design, construction and operation. The speakers were Albert Reichmann, division engineer, American Bridge Company; Edward Haupt, president, Strobel Steel Construction Company; J. G. Young, engineer, Chicago Plan Commission; C. P. Hazlett, general manager, Scherzer Rolling Lift Bridge Company; Thomas E. Brown, Jr., consulting engineer, New York, and Dr. J. A. L. Waddell, consulting engineer, New York, the first five discussing bascule bridges and the last named the vertical lift, of which he was the originator.

Electrical Engineers' Meeting at Philadelphia

The meeting to be held by the American Institute of Electrical Engineers in Philadelphia, Pa., on February 5, heretofore noticed in the *Railway Age*, is to have addresses by a half dozen or more prominent railroad men besides prominent leaders in other lines; and in connection with the meeting the Pennsylvania Railroad will have on exhibit, at Thirty-third street, West Philadelphia, of "a complete line" of its latest designs of steam and electric locomotives. The meeting is to be held in the Metropolitan Opera House and the addresses will be broadcast by radio from a half dozen different stations. Among the speakers scheduled for the afternoon meeting are L. C. Fritch, vice-president, Chicago, Rock Island & Pacific; W. M. Whinton, vice-president, Missouri-Kansas-Texas; L. G. Coleman, assistant general manager, Boston & Maine; A. G. Trumbull, chief mechanical engineer, Erie; W. L. Bean, assistant mechanical engineer, New York, New Haven & Hartford; F. E. Williamson, general superintendent, New York

Central; C. P. Dampman, supervisor of fuel conservation, Philadelphia & Reading; and others.

In the evening those expected to speak are Ralph Budd, president, Great Northern; E. G. Buckland, vice-president, New York, New Haven & Hartford; A. J. County, vice-president, Pennsylvania Railroad; Frank H. Sisson, vice-president, Guaranty Trust Company, and H. B. Thayer, president, American Telephone & Telegraph Company.

The electric freight locomotive known as the "FFI," which was built in 1917, will be exhibited beside a steam locomotive representing the latest developments in steam power for freight service. A new electric locomotive, called the L-5, which was described in the *Railway Age* of Jan. 26, will be exhibited beside the latest and largest type of steam passenger locomotive used by the Pennsylvania and one of the newest multiple-unit cars will be shown with the latest type of steam coach. This exhibit will offer to the delegates at the A. I. E. E. convention and to the public in general, an opportunity to compare side by side the latest developments in steam and electric motive power for both freight and passenger service.

The "Searchlight Special" On the P. R. R.

The lineman, of the telegraph department, is one of the few men in outdoor railroad service who is not liable to be called on for much night work—or, rather, the lineman *was* thus easily circumstanced. Today he cannot be so sure. B. F. Dickinson, supervisor of signals of the Philadelphia division of the Pennsylvania Railroad, reduced the wire troubles caused on his division in the last cold snap (when Boreas reduced the length of the wires) by going out with searchlights at 2 a. m.; and between Harrisburg and Lancaster, 36 miles, mended eight breaks in the wires.

This little enterprise for saving time was not originated on the spur of the moment. Some months ago, when wires were not suffering from low temperatures, James C. Moore, foreman, conceived the idea of using locomotive headlights to illuminate wire lines, and a couple of headlights, with strong reflectors, were fitted on the side doors of a work car, one on either side of the car; the reflectors so arranged that they could be adjusted to throw the rays up or down, forward or backward. Thus the wires could be readily followed at places where the pole line goes over a hill. The lights may be fed from standard passenger car lighting systems, either 32 volt or 65 volt. An experimental trip was made one night last autumn.

On the advent of zero weather and broken wires, the car, with its lights, was made ready; and a train of three cars was started out, all of the lights in the cars being extinguished except the searchlights. The watches for the breaks placed themselves in position far enough back from the searchlights to get good views of the pole line on either side of the road. On discovery of a break, the engineman was signaled to stop and but little time was consumed in setting the train back to the break.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Exhibit by Air Brake Appliance Association.

AIR BRAKE APPLIANCE ASSOCIATION.—Joseph Sinkler, Pilot Packing Company, 122 South Michigan Ave., Chicago. Meeting with Air Brake Association.

AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—L. A. Stone, C. & E. I. Ry., Chicago.

AMERICAN ASSOCIATION OF ENGINEERS.—C. E. Drayer, 63 E. Adams St., Chicago.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—Grant Williams, 1341 Railway Exchange, Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 So. Michigan Ave., Chicago. Next meeting, June 3, 1924, Montreal, Canada.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.

- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothchild, Room 400, Union Station, St. Louis, Mo. Next meeting, June 18-20, 1924, Buffalo, N. Y.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 8 W. 40th St., New York.
- AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borchardt, 202 North Hamilton Ave., Chicago, Ill.
- AMERICAN RAILWAY ASSOCIATION.—J. E. Fairbanks, General Secretary, 30 Vesey St., New York, N. Y.
Division I.—Operating, J. C. Caviston, 30 Vesey St., New York, N. Y.
Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y.
Safety Section.—J. C. Caviston, 30 Vesey St., New York.
Telegraph and Telephone Section (including former activities of the Association of Railway Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York, N. Y.
Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago, Ill.
Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.
Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Next annual meeting, March 11-13, 1924, Chicago. Exhibit by National Railway Appliances Association.
Construction and Maintenance Section.—E. H. Fritch.
Electric Section.—E. H. Fritch.
Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York, N. Y. Annual meeting March 13 and 14, 1924, Drake Hotel, Chicago. Next "stated meeting," Sept. 22, 1924, Ocean View Hotel, Swampscott, Mass.
Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual convention, June 11-18, 1924, Atlantic City, N. J. Exhibit by Railway Supply Manufacturers' Association.
Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill.
Division VI.—Purchases and Stores, including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y. Annual meeting, June 16-18, Atlantic City, N. J.
Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill. Next convention, April, 1924, New Orleans, La.
Car Service Division.—C. A. Buch, 718 18th St., N. W., Washington, D. C.
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Next annual convention, Oct. 21-23, 1924, Kansas City, Mo. Exhibit by Bridge and Building Supply Men's Association.
- AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—W. H. Hill, Agricultural Agent, New York Central, Chicago. Next annual meeting, May 14-16, 1924, Savannah, Ga.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railway Association, Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Next annual meeting, March 11-13, 1924, Chicago. Exhibit by National Railway Appliances Association.
- AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.—(See American Railway Association, Division V.)
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—J. A. Duca, Tool Foreman, C. R. I. & P. Ry., Shawnee, Okla. Exhibit by Supply Association of the American Railway Tool Foremen's Association.
- AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, Union Trust Building, Washington, D. C.
- AMERICAN SOCIETY FOR STEEL TREATING.—W. H. Eisenman, 4600 Prospect Ave., Cleveland, Ohio.
- AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, 1315 Spruce St., Philadelphia, Pa. Annual meeting, June 23-27, Chalfonte-Haddon Hall, Atlantic City, N. J.
- AMERICAN SOCIETY OF CIVIL ENGINEERS.—Prof. J. H. Dunlap, 33 W. 39th St., New York. Regular meetings 1st and 3rd Wednesdays in month, except July and August, 33 W. 39th St., New York.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, A. F. Stuebing, Chief Engineer, Bradford Draft Gear Co., 23 W. 43rd St., New York.
- AMERICAN TRAIN DISPATCHERS' ASSOCIATION.—C. L. Darling, 1310-1311 Mallets Bldg., Chicago, Ill.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.—P. R. Hicks, Room 1146, Otis Bldg., Chicago. Next convention, 1925, Chicago.
- ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, Northern Pacific Ry., St. Paul, Minn. Annual meeting, May, 1924, West Baden, Ind.
- ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.
- ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th and H Sts., N. W., Washington, D. C.
- ASSOCIATION OF RAILWAY SUPPLY MEN.—A. W. Clokey, 1658 McCormick Bldg., Chicago. Meeting with International Railway General Foremen's Association.
- ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.—(See American Railway Association, Division I.)
- ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—(See American Railway Association, Division II.)
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—John Nelson, Joseph E. Nelson & Sons, 3240 South Michigan Ave., Chicago. Meeting with convention of American Railway Bridge and Building Association.
- CANADIAN RAILWAY CLUB.—W. A. Booth, 53 Rushbrook St., Montreal, Que.
- CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.
- CAR FOREMAN'S ASSOCIATION OF ST. LOUIS, MO.—Thomas B. Koeneke, 604 Federal Reserve Bank Bldg., St. Louis, Mo. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.
- CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Meetings, 2nd Thursday, January to November, Hotel Iroquois, Buffalo, N. Y. Interim meetings, 2nd Thursday, February, April, June, Hotel Statler, Buffalo, N. Y.
- CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—A. S. Sternberg, Belt Ry. of Chicago, Polk and Dearborn Sts., Chicago.
- CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.—Bradley S. Johnson, W. H. Miner, Rookery Bldg., Chicago, Ill. Meeting with Chief Interchange Car Inspectors' and Car Foremen's Association.
- CINCINNATI RAILROAD CLUB.—W. C. Cooder, Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.
- DIXIE RAILWAY CLUB.—T. C. Schley, 71 Conti St., Mobile, Ala. Regular meetings, bi-monthly, second and fourth Fridays, Battle House Hotel, Mobile, Ala.
- EASTERN RAILROAD ASSOCIATION.—E. N. Bessling, 614 F St., N. W., Washington, D. C.
- FREIGHT CLAIM ASSOCIATION.—(See American Railway Association, Division VII.)
- GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.—C. H. Treichel, Grand Central Station, Chicago. Regular meetings, Wednesday, preceding 3rd Friday in month, Room 1414, Manhattan Bldg., Chicago.
- INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Annual convention, 1924, Chicago. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.
- INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.—George P. White, 747 Railway Exchange, Chicago. Meeting with International Railroad Master Blacksmiths' Association.
- INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. B. Hutchison, 6000 Michigan Ave., Chicago. Next convention, May 26-29, 1924, Hotel Sherman, Chicago. Exhibit by International Railway Supply Men's Association.
- INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn.
- INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.—Bard Browne, Superheater Co., 17 E. 42nd St., New York. Meeting with International Railway Fuel Association.
- MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 26 Cortlandt St., New York. Next convention, May 20-23, 1924, Hotel Sherman, Chicago.
- MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION.—(See A. R. A., Division V.)
- MASTER CAR BUILDERS' ASSOCIATION.—(See A. R. A., Division V.)
- NATIONAL ASSOCIATION OF RAILWAY TIE PRODUCERS.—J. S. Penney, T. J. Moss Tie Company, St. Louis, Mo. Next convention, 1925, Chicago.
- NATIONAL ASSOCIATION OF RAILWAY AND UTILITIES COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York. Next convention, Nov. 11, 1924, Phoenix, Ariz.
- NATIONAL FOREIGN TRADE COUNCIL.—O. K. Davis, 1 Hanover Square, New York.
- NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, People's Gas Bldg., Chicago. Annual exhibition at convention of American Railway Engineering Association.
- NATIONAL SAFETY COUNCIL.—Steam Railroad Section: E. R. Cott, Safety Agent, Hocking Valley Ry., Columbus, O.
- NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.
- NEW YORK RAILROAD CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August, at 29 W. 39th St., New York.
- PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2nd Thursday in month, alternately in San Francisco and Oakland.
- RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, 1116 Woodward Building, Washington, D. C.
- RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 600 Liberty Bldg., Broad and Chestnut Sts., Philadelphia, Pa.
- RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.
- RAILWAY DEVELOPMENT ASSOCIATION.—(See Am. Ry. Development Assn.)
- RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—J. Scribner, General Electric Co., Chicago. Annual meeting with Association of Railway Electrical Engineers.
- RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—H. A. Varney, Sunbeam Electric Manufacturing Co., Evansville, Ind. Meeting with Traveling Engineers' Association.
- RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.
- RAILWAY REAL ESTATE ASSOCIATION.—R. H. Morrison, C. & O. Ry., Richmond, Va.
- RAILWAY SIGNAL ASSOCIATION.—(See A. R. A., Division IV., Signal Section.)
- RAILWAY STOREKEEPERS' ASSOCIATION.—(See A. R. A., Division VI.)
- RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Exhibit at A. R. A., Division V. convention, June 11-18, 1924, Atlantic City, N. J.
- RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.
- RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, Commercial Trust Bldg., Philadelphia, Pa. Annual meeting, September 18 and 19, Montreal, Canada.
- ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—P. J. McAndrews, C. & N. W. Ry., Sterling, Ill. Next convention, September 16-18, 1924, New York. Exhibit by Track Supply Association.
- ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.
- SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, Sunbeam Electric Manufacturing Company, New York City. Meeting with American Railway Association, Signal Section.
- SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. J. Merrill, P. O. Box 1205, Atlanta, Ga. Regular meetings 3rd Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.
- SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. L. Carrier, Car Serv. Agent, Tenn. Cent. Ry., 319 Seventh Ave., North Nashville, Tenn.
- SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—H. S. White, 9 N. Jefferson St., Chicago.
- TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association.
- TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, 1177 East 98th St., Cleveland, Ohio. Exhibit by Railway Equipment Manufacturers' Assn.
- WESTERN RAILWAY CLUB.—Bruce V. Crandall, 605 North Michigan Ave., Chicago. Regular meetings, 3rd Monday each month, except June, July and August.
- WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, 1735 Monadnock Bldg., Chicago, Ill.

Traffic News

The Chicago, Burlington & Quincy announces reductions in freight rates on iron and steel products from Chicago to Colorado common points to meet recent reductions from Pittsburgh to Colorado.

The Associated Traffic Clubs of America will hold a meeting at Detroit, Mich., in April. It is proposed to amend the constitution to permit the regular annual meeting to be held in April instead of May.

The Terminal Railroad Association of St. Louis established a record in the history of the company on January 23, when the traffic interchanged with connecting carriers totaled 8,199 loaded and 1,500 empty cars.

Two trains of 10 cars each carrying 4,900 bales of silk from Seattle to New York passed through Chicago last Monday. The train was run over the Great Northern from Seattle, to St. Paul; over the Chicago & North Western thence to Chicago and the rest of the way over the Pennsylvania.

The Canadian Government Merchant Marine during May will extend its steamer service to Ketchikan, Alaska, and Skagway to operate in conjunction with the Canadian National railway from Seattle, Vancouver and Victoria. The Prince George and the Prince Rupert, which have not run to points north of Stewart in the Portland canal since 1918, will be used in this service and a new boat will be built this year for use in 1925.

Black Tom Disaster Laid to Germans

The disastrous explosion at Black Tom Island, New York Harbor, on July 30, 1916, in which many millions of dollars' worth of property were destroyed, has been under constant investigation by the Lehigh Valley Railroad, which has had to pay out millions of dollars for the losses, and the company now reports that evidence has been gathered tending to show that the explosion was ordered by the German government. This evidence is to be presented before the Mixed Claims Commission.

New York Central Adopts Motor Trucks

The New York Central has recently installed motor trucks to handle less than carload freight as the first step in what is expected to be a widespread program along this line. As a result of this first installation, it has been possible to annul a way freight train on the Putnam division and to handle all the work formerly done by this train with two 5-ton motor trucks. Trucks now take freight from Yonkers, N. Y., on the main line to Dunwoodie on the Putnam division and to all stations north as far as Yorktown Heights. Another truck collects and delivers freight between Yorktown Heights and Brewster, stopping at all intermediate stations. The work so far has tended to show that the l. c. l. freight can be handled cheaper by motor trucks and that better service can be given, collection and delivery now being daily at every station instead of on alternate days as formerly.

Steel Exposition at Boston

The sixth convention and international steel exposition of the American Society for Steel Treating will be held in Boston, Mass., the week of September 22 to 26 inclusive. Through the courtesy of Governor Channing H. Cox and Chairman William F. Williams of the division of highways and waterways, permission has been granted the society to use the Commonwealth Pier for the exposition. This pier is ideally located and has excellent facilities for the exhibition. As the dimensions of the pier are 120 ft. by 1,200 ft., all of the spaces may readily be placed on one floor. The program committee, under the direction of L. D. Hawkrig, held a meeting in New York in December and laid plans for the convention papers, and it is confidently expected that the papers will be of such caliber that the meeting will compare favorably with the technical sessions held in Pittsburgh last year.

Commission and Court News

Interstate Commerce Commission

The Commission has issued revised regulations regarding the information to be furnished it in connection with applications for certificates of public convenience and necessity for the construction or extension of lines of railroad and for permission to retain the excess earnings of newly constructed lines.

After an investigation instituted on petition of the Baltimore & Ohio, Norfolk & Western, Chesapeake & Ohio and Louisville & Nashville into the propriety and reasonableness of the divisions accorded those carriers out of the joint rates as increased under Ex Parte 74 on bituminous coal from mines served by their respective lines moving through Toledo, Ohio, to destinations in Michigan, Ohio, Indiana, Illinois and Wisconsin, the commission has issued a decision holding that the divisions are not inequitable or otherwise unlawful.

Personnel of Commissions

William L. Reynolds of Denver, Colo., has been appointed railway and hydraulic engineer of the Colorado Public Utilities Commission, succeeding C. D. Vail, who has resigned.

State Commissions

The Massachusetts Department of Public Utilities held a hearing in Boston on January 28 on various petitions asking a reopening of the question of increased fares on the three principal railroads in the vicinity of Boston. At the request of some of the complainants the commission adjourned the hearing until March 5.

The Public Utilities Commission of Rhode Island on January 15 authorized advances in commutation tickets on the New York, New Haven & Hartford, substantially the same as those recently approved by the Massachusetts commission. The Rhode Island case dealt with 60-trip tickets and 46-trip pupils' tickets, and the advance was about 20 per cent.

A permanent injunction was issued by the federal court at Pine Bluff, Ark., on January 18, restraining the Arkansas Railroad Commission from enforcing rulings issued by it in 1920 reducing rates on intrastate shipments of road building materials 10 per cent. The suit was filed on July 29, 1920, against the Chicago, Rock Island & Pacific, the Missouri Pacific, the Missouri & North Arkansas, the Kansas City Southern, the St. Louis-San Francisco and the St. Louis-Southwestern, and an interlocutory injunction against the commission was issued on August 31, 1920.

Court News

Care Required as to Dogs Near Track

A different rule prevails as to dogs from that relating to stock as regards care, to avoid injuring them, resting on the superior instinct, if not intelligence of the dog, and the celerity with which it can avoid danger; and the fact that the engineer sees a dog standing on a parallel track creates no duty of extra diligence or precaution.—N. C. & St. L. (Ala.) 96 So. 79.

Messenger Accompanying Fruit to Attend to Ventilation Relieves Carrier

The Texas Court of Civil Appeals holds that if the consignee of a shipment of bananas has given implied authority, by acquiescence, to the shipper to employ a messenger to accompany the shipment and attend to the ventilation of the car, the railroad company will be relieved of its common law duty as to proper ventilation. The bill of lading read: "E. Ryan, messenger in charge," and the messenger accompanied the car all the way.—N. Negro & Co. v. H. & T. C. (Tex. Civ. App.) 250 S. W. 739.

Shipper Suing on Contract Bound Thereby Though Blanks Filled Up After He Signed It

The Texas Court of Civil Appeals holds that if a shipper of live stock signs a contract of shipment with certain blanks not filled out, expecting the carrier's agent to fill them out, he is bound by the entire contract as the agent fills it out where, in an action, he relies on some of the terms of the contract.—*Hines v. Thornton* (Tex. Civ. App.) 251 S. W. 523.

Commission's Order to Stop Trains Held Not Unreasonable

The Louisiana Supreme Court holds that an order of the Railroad Commission for the stopping of one train each way on signal at a place containing post office, church and school, where 1,678 passengers in 6 months had boarded or left trains which stopped at times, was not so clearly unreasonable as to be arbitrary.—*V. S. & P. v. Railroad Commission* (La.) 96 So. 832.

Cattle Guard Dangerous for Cattle to Pass Over

In an action for the loss of a mule which broke its leg trying to pass over a cattle guard, the Alabama Supreme Court holds that the cattle guard required by the state statute is intended to prevent the passage of horses and cattle over it, and not to afford them a safe passage, and such a guard is not negligently constructed though it is dangerous for cattle to pass over.—*Davis v. Lawler* (Ala.) 96 So. 256.

Fixing Interstate Freight Rate Within New Mexico Commission's Power

The New Mexico Supreme Court holds that the fixing of an intrastate freight rate of 65 cents a ton on coal in carload lots on the New Mexico Midland between Carthage and San Antonio, by the State Corporation Commission on December 2, 1920, was within the Commission's power under section 7 of article 11 of the state constitution, and is a just, reasonable and compensatory rate.—*Kinney v. New Mexico Midland* (N. Mex.) 214 Pac. 754.

Contracts for Exchange of Transportation for Advertising

The Texas Court of Civil Appeals holds that the statute allowing contracts between railroads and publishers for exchange of transportation for advertising, permits the fixing of a time limit to the mileage coupons and naming the person entitled to use them. The statutory penalty for discrimination could only be recovered by showing unfair and discriminatory treatment as between publishers in the contracts or coupons.—*Russell v. St. Louis S. W.* (Tex. Civ. App.) 250 S. W. 1076.

Changing Rates by Printing New Tariffs

The Interstate Commerce Commission has power to declare a rate unreasonable; but assuming that it has done so, the only way it can be changed so as to relieve the carrier from the obligation of applying the old rate is to require the carrier under section 6 of the Interstate Commerce Act to print new tariffs showing the changes, or by indicating on tariffs already in force that such changes have been made, and until this is done the carrier must charge the old rate, even if it is excessive and discriminatory.—*Mobile & Ohio v. Southern Sawmill Co.* (Mo. App.) 251 S. W. 434.

Coal Confiscated in Transit; Value Affected by Strike in British Mines

The Circuit Court of Appeals, Fourth Circuit, holds that the measure of damages for confiscation of coal in transit is its market value under the particular circumstances existing when it is taken, and in the case of coal for export, the market value of which had been for two months or more considerably higher than that of domestic coal, owing to a strike in the British coal mines, the shipper was entitled to the benefit of the enhanced price.—*Norfolk & Western v. Ft. Dearborn Coal & Export Co.*, 292 Fed. 78.

Labor News

Canadian Maintenance Employees Favor Strike

Members of the United Brotherhood of Maintenance of Way Employees & Railway Shop Laborers on the Canadian railways have declared in favor of a strike, according to an announcement from the headquarters of the brotherhood after completion of the count of the votes. It was said that from 80 to 90 per cent of the brotherhood members favor a strike. The strike vote, which began on January 15, was precipitated by the refusal of the railways to accept a decision of the Conciliation Board awarding an increase in wages of two cents an hour to the maintenance employees.

Hearings in the Suit Against the Pennsylvania

In the United States Court at Philadelphia on January 28, testimony was taken in the suit of the labor unions against the Pennsylvania Railroad, alleging illegal action on the part of the railroad company in favoring the "company unions" of its employees. Testimony was given to the effect that employees belonging to the company unions, when attending conferences with officers of the road, had their hotel bills paid by the railroad company. The counsel for the road moved to dismiss the bill in equity, on which the litigation is based, but the court refused to grant the motion until the plaintiff shall have presented all of his evidence.

Labor Board Decisions

Election Classifications of Checkers

In a dispute between the Minneapolis, St. Paul & Sault Ste. Marie and the Brotherhood of Railway & Steamship Clerks, the Labor Board has decided that checkers shall be permitted to vote in the election to determine the representatives of the clerical employees. (*Decision No. 2087.*)

Classification of Supervisory Employees

The Railroad Labor Board, in a dispute between the Oregon-Washington Railroad & Navigation Company and the Brotherhood of Railway & Steamship Clerks, has held that general foremen and division fuel supervisors shall be permitted to vote in an election to determine representation of the clerical employees. The board also held that car distributors who are not required to use telegraph instruments in the performance of their duties shall also be permitted to participate in the ballot. (*Decision No. 2083.*)

Representatives of Pennsylvania Telegraphers

In a dispute brought before the Railroad Labor Board by the Order of Railroad Telegraphers, involving elections of telegraph employees' representatives on the Pennsylvania, the Labor Board has held that the Order of Railroad Telegraphers does not represent the telegraph department employees of the road. The board held that the questions raised were within its jurisdiction but that they must be brought before the board by the committee authorized to represent the employees, either by a new submission or by amendment to pending submission. (*Decision No. 2079.*)

Application of Telegraphers' Wage Increase

In a dispute between the Order of Railroad Telegraphers and the Chicago & Western Indiana over the application of the wage increase of three cents an hour authorized in Decision No. 2025, the Labor Board upheld the position of the employees. The employees claimed that the increase of three cents an hour was inadequate and did not bring their rates of pay up to the average rates of employees of the same classification employed in the Chicago terminals of other roads. They therefore proposed the exclusion of the block operators (whose positions were soon to be abolished) from the effect of the wage increase and the spread of the amount of their portion of the increase over the remaining 51 employees. (*Decision No. 2084.*)

Foreign Railway News

Experts Hope to Show How German

Roads Can Be Made to Pay

The committee of experts which is examining into financial and economic conditions in Germany has undertaken a study of the government-owned railways, which are now suffering heavy deficits. It is believed that if these properties can be made to produce revenues an important step forward in solving Germany's economic problems will have been taken. At a meeting of the committee in Paris on January 25, Sir William Acworth, the well-known British railway expert, and M. Lefevre of France, presented their views.

Meeting on International Freight

Traffic in Switzerland

The committee of the International Freight Car Union will meet at Vevey, Switzerland, on March 18, 1924, as guests of the Swiss Federal Railways. Suggestions for revision of the existing agreement for reciprocal use of freight cars in international traffic will be considered, according to Commerce Reports. This agreement has to do with technical requirements regarding the state of repair of the cars, methods of loading, types of signs to be used for different purposes and related subjects. Two years of usage have developed many complaints as to this agreement, and these objections, suggestions, and remarks are being arranged for discussion at the meeting scheduled for next March. A new project of agreement will be drafted to be placed before the next plenary assembly of the International Freight Car Union.

Representatives of the following railways compose the committee: Paris-Lyon-Méditerranée, Belgian State, Italian State, German State, and Swiss Federal Railways. A total of 102 railway administrations adhere to the agreement with varying degrees of reciprocity; of these the following administrations have been requested to take part in a consultative capacity: Austrian Federal, Bulgarian State, Danish State, Eastern of France, Northern of France, French State, Paris-Orleans, Midi, Alsace-Lorraine, Hungarian State, Yugoslav State, Netherlands State, Norwegian State, Polish State, Rumanian State, Swedish State and Czechoslovak State Railways.

Progress in the Construction of the

Pan-American Railway

With the completion of the railroad between Atocha and Villazon, in Bolivia, another link in the long-discussed Pan-American railway system will have been added. It is expected that the last rail will be laid early in 1925, in time for the Bolivian centennial. In addition to forming a link in the proposed all-rail route between New York and Buenos Aires, the line will connect La Paz, capital of Bolivia, with Buenos Aires, thus giving to Bolivia, one of the two inland countries of South America, an outlet on both the Atlantic and Pacific coasts.

Coincident with this resumption of work on the all-American rail route, the governing board of the Pan-American Union has undertaken the reorganization of the Pan-American Railway Committee. Created by the Second International Conference of American States to aid in carrying into effect the project of an inter-continental railway, the route of which had been surveyed by a commission appointed as a result of a resolution adopted by the First Conference, the committee has performed important services in encouraging the construction of different sections of the road. Realizing the importance of the project conceived by the statesmen of thirty years ago, the Fifth International Conference of American States, held in 1923, provided for the reorganization of the committee, entrusting this function to the governing board of the Pan-American Union. The matter is now receiving the consideration of the board and a decision will probably be reached at the meeting to be held on February 6.

The route originally mapped out by the Pan-American Railway Committee called for the construction of a line from New York to the Mexican border, and thence through the republics of Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia,

Ecuador, Peru, Bolivia and Argentina to Buenos Aires, with extensions from the main line to those countries not in the direct path of the railway. Of this distance of approximately 10,116 miles, 6,696 miles will have been built upon completion of the Bolivian sector, leaving 3,420 miles yet to be constructed. The northern section of the line, from New York to the frontier of Guatemala, has been entirely completed, as will be the southern portion from Buenos Aires to Lake Titicaca, on the border between Bolivia and Peru, in 1925. The greatest gap in the Pan-American system is in the region between Panama and Lake Titicaca, where approximately 2,820 miles yet remain to be built. This territory is very mountainous, making it extremely difficult to construct railways, and it is for this reason that a well-known Argentine engineer, Sr. Juan A. Briano, has suggested a change in the original route. According to this plan the railroad would avoid the mountainous region along the Pacific coast of South America, and traverse the interior of South America, passing through western Brazil and entering Bolivia on the northeast. The suggestion of Sr. Briano has aroused considerable comment, and may receive the consideration of the Pan-American Railway Committee upon its reorganization.

New Coat-of-Arms for the London & North Eastern

The London & North Eastern, which was formed by the amalgamation of the Great Central, Great Eastern, Great Northern, North Eastern, North British and Great North of Scotland companies, has been granted a coat-of-arms by the British Heralds' College. The Heralds' College in England is an official body and a coat-of-arms is registered and is as much a piece of private property as a trade mark. Heraldry, moreover, employs only conventional figures so that, given a description in regular heraldic terms, a trained artist could reproduce it without an original to copy from. The description of the coat-of-



The New L. N. E. R. Coat-of-Arms

arms, shown in the accompanying illustration, which puts the London & North Eastern in a class with the nobility, is given in heraldic terms as follows:

"Argent on a Cross Gules between in the first and fourth quarters a Griffin segreant Sable in the second a Rose of the second leaved and slipped proper and in the third quarter a Thistle also leaved and slipped proper the Castle of Edinburgh proper between four lions passant guardant Or and for the Crest on a Wreath of the Colours Issuant from Clouds of Steam the figure of Mercury proper."

In the above, "argent" means silver; "gules," red; "sable," black; and "or," gold. Terms such as "segreant," "slipped," "proper," "passant," etc., are descriptive of the form in which the object mentioned appears.

Enginemens' Strike in Britain Settled

The strike of the members of the Associated Society of Locomotive Engineers and Firemen in Great Britain which began at midnight on January 20, was terminated early in the morning on January 29 as a result of negotiations between representatives of the striking union and the railway managers. The men had struck against an award of the National Wages Board which made some unfavorable changes in working conditions. They were not joined, however, by the National Union of Railwaymen to which about a third of the engine service employees in the country belong. Consequently railway service, although severely curtailed, was not tied up completely. The relatively quick settlement of the trouble is thought to have been due to pressure exerted upon the strikers by the Trades Union Congress, which was anxious lest the disturbance might curtail the tenure of office of the Labor government which holds on only by sufferance of the Liberal members of the House of Commons.

French Railway Policy in Occupied

Germany Bitterly Criticized

The French government, desiring to have the British, who occupy the Cologne area, turn over the operation of these railways to the Franco-Belgian "Régie" which operates the railways in the Ruhr, has refused to ratify a tentative agreement entered into between the British and M. Bréaud, director-general of the Régie, providing for through railway traffic between Cologne and the Ruhr. The result is said to be serious to Cologne and the correspondent of the Times (London) in a dispatch to his journal dated January 14, thus describes the situation:

"The present stagnation is the result of the French demands to have the railways of our (i. e., the British) zone handed over to them. The Régie was created last March by the French Ordinance No. 149 of the High Commission on the ostensible ground that as the German railwaymen had gone on strike (on the seizure of their system by French troops), it was necessary to replace them. This ordinance was suddenly produced by the French on their own, and the British did not assent to it. Although at the end of passive resistance all excuse for the continuation of the Régie vanished, the French declined to restore the railways to their rightful owners, being determined to make them another link in the chain which they hoped to complete by the virtual annexation of the Rhineland and the Ruhr.

"Once again the 'British Gibraltar on the Rhine' stands in the way. Ordinance 149, like the others passed in the course of the illegal French Rhine-Ruhr action, had never applied here, nor had we recognized the Régie as having legal rights. Even the ostensible reason for its creation cannot be brought forward in the case of Cologne, since the railwaymen here never left their work; on the contrary, they co-operated loyally with us, going even beyond the limits of the Godley-Payot agreement in transporting French troops and supplies through our zone.

"No one being in a position to force the Régie to restore to its rightful owners the property which it had seized in the French and Belgian areas, its *de facto* existence had to be dealt with. Last month the agreement mentioned above was concluded. Under this the Régie was to retain all receipts for through bookings and freights to Cologne made in its area, but the German administration here was to hand over to the Régie 50 per cent of the money received for through bookings and freights originating in the British zone. Every one expected an immediate resumption of through traffic.

"M. Bréaud, however, went to Paris with the agreement in his pocket, and the bombshell fell. M. Poincaré repudiated the agreement and demanded before all else the surrender of the British zone railways to the French. This action and the ensuing stagnation suited M. Bréaud admirably.

"The Régie has shown itself, especially as regards goods transport, the most incompetent railway administration in Europe. In the Ruhr it cannot handle the coal deliveries made under the Düsseldorf agreement. Its freight system is hopeless, as a leading Paris newspaper has indignantly testified. Trucks (i. e. freight cars) are lost for weeks or forever; British military supplies are—it is to be presumed—accidentally subjected to inexplicable delays, while probably the Régie's finest achievement was the loss of two complete French troop trains, which were ultimately discovered forgotten in out-of-the-way sidings.

"The Régie's excuses for this state of affairs have disappeared one after the other; it is overwhelmed with applications for em-

ployment, but retains all higher posts in incompetent French hands, employing an insufficient number of Germans in the lower grades. The 8,000 trucks for which it clamored were sent—for three days, at the end of which M. Bréaud was forced to cry 'Hold, enough' as his incompetent staff and disorganized sidings were suffocating under the masses of rolling stock which they could not handle. If, through the restoration of through traffic in Cologne, their last excuse for incompetence is removed, the Régie will stand revealed to the world as a lamentable failure.

"Thus the French can well afford to delay a settlement. With the aid of propaganda, particularly in the Kölner Tagblatt, which newspaper, from the alacrity it shows to further French aims, is popularly called by Germans 'Le Moniteur Officiel,' it is hoped to thrust the blame for the disgraceful traffic conditions on to the British and make our administration unpopular.

"The result of the surrender of the railways would be manifold. It would give France the railways from Holland to Switzerland—to which the latter countries are believed to be strongly opposed—with power to differentiate against British and other freights in favor of French industry, as she already differentiates in other matters through her economic control. Our zone would be invaded by French officials, who, instead of ourselves, would control the railways. Whereas we can give orders to the Germans knowing they will be obeyed, we should have to make appeals to the French. It would be a breach of faith with the German railwaymen who have loyally co-operated with us, since wholesale dismissals and reduction of pay to the starvation franc wage paid by the Régie would ensue. It would be a breach of the Rhineland Agreement and the Peace Treaty, to which we alone of the present occupying powers have remained consistently loyal, and, finally, it would mean the surrender of one more link in the French annexation chain and a final blow to our prestige.

"The firm attitude of the British government is reassuring evidence that such a disastrous surrender will not be made."

China Notes

PEKING

Although the demands made by the diplomatic corps with respect to amends for the Lincheng incident have been accepted in full by the Chinese government, nothing has actually occurred. The diplomatic corps has said that it had under consideration a plan for the policing of the railways. The Ministry of Communications also gave out that it was working on a plan for the more efficient policing of the railways. It appears that while the foreign plan seemed imminent, the Ministry seemed to have influence enough to reorganize the railway police on a regional basis, with an intelligence department, training barracks, and a definite schedule of garrison, patrol and outpost duty. But when the imminence of the foreign plan became a subject of doubt, local politics became strong enough to protect the position of each chief of police on the individual railways. So, now, if the Ministry is to put into force its plan for training in barracks, it will have to do so with an additional force of police recruited by its own officers. In this way, there will be a duplication of numbers, a dividing of responsibility for protecting the lines, and the inevitable confusion which results from overlapping authority. This incident will serve for some time to come as an illustration of the evil effects of unwise meddling on the part of the foreign powers with technical matters of which they have little knowledge.

In the meantime the authorities in Shantung have started a clean-up of bandits which is progressing quite successfully. The "Blue Train" has resumed its former schedule and the Shantung railway is again running its night train between Tsinan and Tsing Tau. The night express between Peking and Hankow is also running on its former schedule,—two hours slower—but in Honan the situation is not comfortable. A short time ago this train was saved only by the heroism of an old flagman. Mutinous soldiers had removed spikes from the track within the station limits,—the intention evidently being to secure captives for ransom rather than mere loot. The flagman had been ordered to display the "clear" signal as the train approached,—which he did. But no sooner had he placed the blue light than he swung the red light so violently as to warn the engine driver, who was able to reverse and back out of the station before the bandits became aware of his intention. Then they shot the flagman. Troops were sent against mutineers and drove them westward with a few casualties.

On October 25 the last section of the Sshu-Tao line, 145 miles, was opened to construction trains. This is a government railway in Manchuria, but has been constructed and will be operated by

the South Manchurian Railway. This line began as the Ssiping Kai-Chenchiatun, 55 miles, completed late in 1917. Next, the extension to Taonan was projected, but instead of building to Taonan the line was extended southwesterly to Tungliao in the direction of Jehol. That section was completed about four years ago. Somehow, or other, the common information was that the line to Tungliao was a section of the main line to Taonan. But now it is known that the Tungliao section is only a branch. This branch will serve to keep alive the Japanese right to build on to Jehol (and perhaps later to Peking) when the Consortium agreement expires.

For ten days following September 26, the Ninth Conference of the Standing Committee on the Unification of Railway Accounts and Statistics was in session. It was announced that hereafter the Postal Administration will pay for the carriage of the mails at the rate of \$0.001 per cubic metre of space occupied per kilometre of haul. Besides the revisions of station forms, the principal subject before the conference was that of workshop accounts. As in other departments prior to standardization, each line has had its own form of workshop accounts. The standardization of operating expenses brought about a certain degree of uniformity in that it definitely located the main items of supervision and repairs to machinery and tools under expense heads. But the Shantung Railway brings to the group the Japanese practice which is to regard the shops much in the light of an "outside operation." On the other hand, the Chinese Eastern offers the example of Russian practice which is to allocate all shop expense to definite expense heads. Taking a course between these two extremes, the government railways allocate expenses for supervision, for repairs to central mechanical works and to plant and tools, as well as certain described miscellaneous expenses to definite expense heads. All other "overhead" will be treated as suspense to be distributed to jobs on the "labor cost" basis. A formulation committee was appointed to draft the wording of rules and the necessary forms to report to the May meeting of the Standing Committee.

The Ministry of Communications has recently published a list of all of its debts. From this it appears that the Ministry owes \$719,365,000 (Mex) of which \$619,302,000 (Mex) lies against the railways. The service on this railway debt for the year 1923 is given as slightly in excess of \$72,000,000 (Mex) for interest and principal. To meet this, the railway net revenue will probably not amount to more than \$34,000,000 (Mex). The figure was \$32,000,000 (Mex) in 1922. It appears that fully half of this debt is for advances received by the government against lines that have never been built as well as for materials which would have been paid for had not military leaders diverted the funds of the Ministry of Communications from their intended purposes.

A curious dispute has arisen between the Ministry of Communications and the British & Chinese Corporation concerning the threatened default on the Canton-Kowloon interest and principal. The line has no earnings this year due to the fighting around Canton. The Ministry offers to meet the payments out of its share of the profits of the Shanghai-Nanking line. Although the British & Chinese Corporation is trustee for the bondholders of the Canton-Kowloon line as well as for those of the Shanghai-Nanking line, it refuses to accept the Chinese share of the profits of the latter line to pay the loan service of the Canton-Kowloon, claiming that according to the loan agreement the Chinese share can be used only for the repayment of the Shanghai-Nanking bonds. The Shanghai-Nanking bonds are not due until 1954 and the Ministry quotes in support of its position the following from the Loan Agreement in question: "the net profits will be retained and used by the Railway Administration for the purpose of accumulating a fund * * * wherewith to pay off any loan bonds which may from time to time be redeemed under the provisions of this agreement, or for generally reducing or ultimately discharging railway loan obligations whenever or wherever desirable by means of the profits of the railway." The British & Chinese Corporation contends that the two clauses on either side of the word "or" refer to the same thing,—Shanghai-Nanking bonds. While the Ministry claims that these two clauses refer to different things and give the Ministry the right to use these funds for interest and refunding purposes on other railways, the purpose of the latter clause being to prevent the government from using these funds for general governmental purposes. To adopt the corporation's point of view would be equivalent to compelling the Ministry to redeem the Shanghai-Nanking bonds within the next fifteen years,—which decision would raise them on the market perhaps fifteen points.

Equipment and Supplies

Locomotives

THE BENNETT MINE has ordered one 0-6-0 switching locomotive from the Lima Locomotive Works.

THE BRIDGTON & SAGO RIVER has ordered one Forney type locomotive from the Baldwin Locomotive Works.

THE TOLEDO FURNACE COMPANY has ordered one 0-6-0 switching locomotive from the Lima Locomotive Works.

THE CLOVER VALLEY LUMBER COMPANY has ordered one 2-6-6-2 Mallet type locomotive from the Baldwin Locomotive Works.

THE INTERNATIONAL-GREAT NORTHERN, reported in the *Railway Age* of January 26 as contemplating coming in the market soon for five locomotives, has ordered five Mikado type locomotives from the Baldwin Locomotive Works.

THE NEW YORK CENTRAL has divided an order for about 70 or 80 switching type locomotives between the American Locomotive Company and the Lima Locomotive Works. This item has not yet been officially confirmed.

Freight Cars

THE RUTLAND—See New York Central.

THE LEHIGH VALLEY is inquiring for repairs to 200 box cars.

SWIFT & COMPANY are inquiring for 100 double deck stock cars.

THE MICHIGAN ELECTRIC RAILWAY is inquiring for 15 trailer box cars.

THE CHARLESTON & WESTERN CAROLINA is inquiring for 32 underframes.

THE RUTLAND is now inquiring for 30 or more steel underframes for 30-ton stock cars.

THE EL PASO & SOUTHWESTERN is expected to enter the market soon for 400 box cars.

THE NORFOLK & WESTERN is inquiring for 4,000 steel hopper cars of 70 tons' capacity.

THE PHILADELPHIA & READING has ordered 50 stock cars from the Standard Steel Car Company.

THE UNIVERSAL PORTLAND CEMENT COMPANY has reopened its inquiry for 50, 70-ton hopper cars.

THE FRUIT GROWERS EXPRESS has renewed an inquiry for 100 steel underframes for refrigerator cars.

THE ILLINOIS CENTRAL is inquiring for repairs on 2,095 miscellaneous freight cars and is expected to increase the inquiry later to 8,000.

H. L. DOHERTY & Co., New York, is inquiring for 275 tank cars of 8,000-gal. capacity, 20 insulated tank cars of 8,000-gal. capacity and 75 tank cars of 10,000-gal. capacity.

THE NEW YORK CENTRAL, reported in the *Railway Age* of December 29 as contemplating buying 500 sheathed box cars for the Rutland, has ordered this equipment from the Youngstown Steel Car Company.

THE PENNSYLVANIA, reported in the *Railway Age* of January 12 as inquiring for 3,000 automobile box car bodies, is reported to have placed orders for 2,000 of these car bodies. Official confirmation of this report has not yet been obtained.

THE UNION PACIFIC, reported in the *Railway Age* of January 19 as inquiring for from 250 to 500 tank cars, has ordered 250 tank cars from the American Car & Foundry Co., and 250 tank cars from the Standard Tank Car Company. These cars are to be of 12,500 gal. capacity.

THE CHESAPEAKE & OHIO, reported in the *Railway Age* of January 5 as inquiring for prices for the repair of 1,500 coal cars, has let contracts for repairing 1,000 steel coal cars as follows: Richmond Car Works, Inc., Richmond, Va., to repair 500 hopper-bottom gondola cars, Newport News Shipbuilding & Dry Dock Co., Newport News, Va., to repair 250 hopper-bottom gondola cars and the American Car & Foundry Co., Huntington, W. Va., to repair 250 flat-bottom gondola cars.

Passenger Cars

THE ATLANTIC COAST LINE is inquiring for 10 express cars and 7 combination mail and baggage cars.

THE ATCHISON, TOPEKA & SANTA FE is inquiring for 10 smoking cars, 10 chair cars, 10 coaches, 10 three-compartment cars and 6 business cars.

THE NEW YORK CENTRAL inquiry for passenger cars now includes 50 coaches, 20 dining cars, 25 baggage cars, 20 passenger and baggage cars and 5 baggage and mail cars.

THE LEHIGH & HUDSON RIVER, reported in the *Railway Age* of November 3 as inquiring for 10 refrigerator milk cars, has ordered this equipment from the American Car & Foundry Co.

THE SOUTHERN PACIFIC, reported in the *Railway Age* of January 5 as inquiring for 50 passenger cars, has ordered 15 dining cars, five of which are intended for use on the Southern Pacific lines in Louisiana and Texas, from the Pullman Company; 23 baggage cars from the Bethlehem Shipbuilding Corporation, 6 baggage horse cars and 6 baggage buffet cars from the American Car & Foundry Co.

Iron and Steel

THE MOBILE & OHIO has ordered 178 tons of structural steel from the Virginia Bridge Company.

THE BALTIMORE & OHIO has ordered 650 tons of structural steel from the American Bridge Company.

THE CHICAGO, BURLINGTON & QUINCY has ordered 367 tons of structural steel from the American Bridge Company.

THE CANADIAN PACIFIC, according to press reports, has placed an order for 50,000 tons of rail with the Algoma Steel Company.

THE NORTHERN PACIFIC has ordered 1,675 tons of structural steel for use in Minnesota, North Dakota and Montana, from the American Bridge Company.

THE UNION PACIFIC has ordered 165 tons of structural steel for bridge repairs on the Oregon-Washington Railroad & Navigation Company from the American Bridge Company.

THE CHICAGO & NORTH WESTERN has ordered 35,000 tons of rail from the Illinois Steel Company, 5,000 tons from the Inland Steel Company and 6,000 tons from the Bethlehem Steel Company.

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE has ordered 4,000 tons of rail from the Inland Steel Company and 4,700 tons from the Illinois Steel Company.

Track Specialties

THE WABASH has ordered 600,000 tie plates from the Illinois Steel Company.

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE is inquiring for 3,700 tons of tie plates.

THE NORTHERN PACIFIC has ordered 6,000 tons of tie plates from the Illinois Steel Company.

THE ATCHISON, TOPEKA & SANTA FE has ordered 230,000 rail joints from the Rail Joint Company.

Machinery and Tools

THE ATCHISON, TOPEKA & SANTA FE is inquiring for a 1,600-lb. steam hammer.

Signaling

THE SOUTHERN PACIFIC has ordered from the General Railway Signal Company material for an extensive addition to the electric interlocking at Elvas Tower, Sacramento, Cal.

THE GREAT NORTHERN has ordered from the General Railway Signal Company 290 color light signals to be installed on its line between Havre, Mont., and Wolff Point, Mont.

THE NEW YORK CENTRAL has awarded to the General Railway Signal Company the contract for installing electric interlocking at signal station R. J., Rotterdam Junction, N. Y., 56 working levers and 8 spare spaces.

THE LOUISVILLE & NASHVILLE has ordered from the General Railway Signal Company electro-mechanical interlocking machines, three levers each, for installation at drawbridges at Magazine, Ala., and Hurricane, Ala.

THE LEHIGH VALLEY has ordered from the General Railway Signal Company a mechanical interlocking, with electric locks and other accessories, for installation at Rochester Junction, N. Y. The machine is to be style A, 36 levers.

THE CANADIAN NATIONAL has ordered from the Union Switch & Signal Company 65 Style "R" color light signals and accessories to be used in automatic signaling in the Central district, as follows: London, Ont., to Kamoka, Ont.; Coteau Junction to Pointe Claire, Quebec; Lachine Canal to Point St. Charles, Quebec.

THE CENTRAL OF NEW JERSEY has contracted with the Union Switch & Signal Co. for the complete installation of automatic block signals on its line between Red Bank, N. J., and Winslow Junction, 66 miles, where three-speed continuous automatic train control is to be installed. The entire division is single track. On the 38-mile stretch between Lakehurst and Winslow Junction, where no signaling now exists, the contract provides for a complete absolute permissive block signal system using alternating current track circuits and position-light signals. Between Red Bank and Lakehurst, 27.6 miles, an overlap automatic signal system is now in service with direct current track and control circuits, and semaphore signals. This existing signaling will be changed over by the contractor to a.c. track circuits and position-light signals.

LOCOMOTIVE AND FREIGHT CAR REPAIR SITUATION

Locomotives						Freight cars				
Date	No. locomotives on line	No. service-able	No. stored service-able	No. req. repairs over 24 hr.	Per cent req. repairs over 24 hr.	Date	No. freight cars on line	Cars awaiting heavy repairs	Cars awaiting light repairs	Per cent of cars awaiting repairs
1923						1923				
January 1	64,453	48,905	576	13,587	21.1	January 1	2,264,593	164,041	51,970	216,011 9.5
April 1	64,559	50,107	914	12,801	19.8	April 1	2,296,997	154,302	52,010	206,312 9.0
July 1	63,906	52,456	2,181	10,326	16.2	July 1	2,260,532	146,299	44,112	190,411 8.4
October 1	63,982	54,159	2,620	8,787	13.7	October 1	2,270,840	118,563	32,769	151,332 6.7
November 1	64,192	54,080	2,517	9,163	14.3	November 1	2,263,099	116,084	34,540	150,624 6.6
December 1	64,336	53,764	3,367	9,577	14.9	December 1	2,270,405	116,697	38,929	155,626 6.8
1924						1924				
January 1	64,406	54,031	5,061	9,395	14.6	January 1	2,279,363	118,653	39,522	158,175 6.9

Supply Trade News

The Siems-Stembel Company, Minneapolis, Minn., will construct a one-story car repair shop at Minneapolis to cost approximately \$85,000.

L. H. Welling has been appointed manager of the eastern office of the Graver Corporation, East Chicago, Ind. Mr. Welling's headquarters are at New York City.

Hope E. Scott & Co., Ltd., of 224 St. James street, Montreal, Que., has been appointed representative of the Union Railway Equipment Company, Chicago, in charge of all its Canadian business.

Lathrop & Trotter have been appointed Cincinnati representatives of the Conveyors Corporation of America, Chicago. The offices of Lathrop & Trotter are at 733 Union Trust building, Cincinnati, Ohio.

The National Malleable Castings Company, Cleveland, O., has changed its corporate name to the National Malleable and Steel Castings Company. There is no change in management or personnel.

The General Railway Signal Company has moved its New York City office from the Canadian Pacific building, 342

departments. He will be succeeded by G. S. Crane, manager of controller sales with headquarters at Milwaukee.

N. B. Norris, district manager at New Orleans, La., of the Pawling & Harnischfeger Company, Milwaukee, Wis., has been appointed district manager of the Memphis, Tenn., office. D. J. Murphy of the New Orleans office has been appointed district manager of the Texas district, with headquarters at Dallas, Texas. F. W. Truex will continue as district manager at Atlanta, Ga., with office at 212 Haas-Howell building and W. J. Dugan as southern sales manager will assume charge of the entire southern territory, with headquarters at Memphis.

Pratt & Lambert, Inc., Elects New Officers

At a recent meeting of the board of directors of Pratt & Lambert, Inc., Buffalo, N. Y., A. D. Graves was elected senior vice-president and treasurer; J. B. Bouck, Jr., was elected vice-president in charge of the eastern division at New York City and F. W. Robinson was elected vice-president in charge of manufacturing. The following officers were re-elected: J. H. McNulty, president; J. N. Welter, vice-president in charge of the western division; H. E. Webster, secretary. A. D. Graves entered the service of Pratt & Lambert, Inc., in 1908 as a salesman; ten years later he became manager of trade sales. In January, 1921, he was promoted to general manager and now becomes senior vice-president and treasurer. J. B. Bouck, Jr., began service with Pratt & Lambert, Inc., in 1893 as office boy. He subsequently served successively as salesman, assistant resident manager and resident manager.



A. D. Graves



J. B. Bouck, Jr.



F. W. Robinson

Madison avenue, to the Pershing Square building, 100 East Forty-second street.

The Okonite Company, Passaic, N. J., has recently opened a branch office at Pittsburgh, Pa., in the First National Bank building. This branch office is in charge of Edward A. Damrau, district manager.

George W. Mixter has become associated with Day & Zimmermann, Inc., Philadelphia, Pa. Mr. Mixter will give special attention to industrial work and will have his headquarters at the company's New York office, 2 Wall street.

The Railway Equipment Company, composed of R. E. Bell and W. H. Reeves, 584 Arcade building, St. Louis, Mo., has been appointed to handle the business of the National Lock Washer Company of Newark, N. J., in southwestern territory, effective February 4.

J. C. Bryan, mechanical assistant to the manager of purchases of the American Short Line Railway Association, has been appointed special engineer in the locomotive headlighting equipment department of the Electric Service Supplies Company, with headquarters at Chicago.

W. C. Stevens, general sales manager of the Cutler-Hammer Manufacturing Company with headquarters at Milwaukee, Wis., has been promoted to director of developments for all

In 1917 he was appointed secretary-treasurer of the company and has now been elected vice-president in charge of the eastern division, with headquarters at New York City. F. W. Robinson began work with Pratt & Lambert, Inc., at its New York plant in 1896, he subsequently served as general superintendent and now becomes vice-president in charge of manufacturing.

Trade Publications

THE SPECIAL LIBRARIES ASSOCIATION of the United States, through a committee, is making a study of trade catalogs, and information is desired as to what firms keep an historical collection of such things. Information is desired by Lewis A. Armistead, chairman of the committee, Boston Elevated Railway, 31 St. James avenue, Boston, Mass.

CAR DUMPERS.—A late addition to the catalog information concerning car dumpers is contained in an eight-page booklet issued by the Wellman-Seaver-Morgan Company, Cleveland, Ohio, which illustrates and describes the W-S-M revolving car dumpers. This equipment is well illustrated by half-tone drawings, showing both the parts and the car dumpers, while the reading matter covers both the description of the mechanism and its method of operation.

Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company has included the following new construction in its improvement program for 1924: Grade separation and the construction of viaducts in Los Angeles county, California, which will cost a total of \$2,250,000; a warehouse, 40 ft. by 550 ft., which will be constructed at Fourth street at Santa Fe avenue, Los Angeles, at a cost of \$210,000; additional storage and switch track at Hobart, Cal., which will be constructed at a cost of \$105,000; storage and switch tracks at Corcoran, Cal., and Hanford, which will be extended at a cost of \$11,500 and \$25,000 respectively; and a steel water tank of 50,000 gal. capacity, which will be erected at Ash Fork, Ariz., at a cost of \$7,000.

ATCHISON, TOPEKA & SANTA FE.—This company has awarded a contract to Jerome A. Moss, Chicago, for the laying of a 20-in. suction pipe line in the Mississippi river at Ft. Madison, Iowa, to cost approximately \$70,000.

ATCHISON, TOPEKA & SANTA FE.—This company has awarded a contract to Joseph E. Nelson & Sons, Chicago, for the erection of a boiler washing plant at Dodge City, Kan.

ILLINOIS CENTRAL.—This company will construct a coaling station at Springfield, Ill., with its company forces.

LOUISVILLE & NASHVILLE.—This company plans the construction of a roundhouse and shops at Whitesburg, Ky.

MISSOURI PACIFIC.—This company has awarded a contract to Jerome A. Moss, Chicago, for the construction of a passenger station at Crane, Mo. This company has completed its plans and will soon call for bids for the construction of a one-story brick passenger station at Newport, Ark., reported in the *Railway Age* of December 1.

READING.—This company has awarded a contract to the Curtis-Grinrod Company, Philadelphia, covering the furnishing and erection of a store and oil house at Wilmington, Del. This structure will be a one-story reinforced concrete and brick building, 32 ft. by 84 ft. 3 in., with concrete platforms, concourse, ramp and steps. All of the material entering into it will be furnished by the contractor.

READING.—This company has awarded the following contracts in connection with the construction of its passenger terminal at Camden, N. J.: To the Marine Docking & Supply Company, Philadelphia, for magnesite composition flooring, base and wainscoting; to Martin & Breen, Inc., Philadelphia, for asphalt flooring; to Richmond & Kemp, Philadelphia, for the furnishing and erection of glazed steel and iron gate partitions between the ramp and train platforms.

READING.—This company has awarded to the McLean Contracting Company, Philadelphia, a contract for the erection of the sub-structure for a bridge to carry the tracks of the Atlantic City Railroad over Clinton avenue, Oaklyn station, New Jersey. The Johns-Manville Company, Philadelphia, will waterproof the structure. The company has also awarded contracts respectively to the Frederick Snare Corporation and the McClintic-Marshall Company, both of Philadelphia, for the sub-structure and the super-structure for the reconstruction of a bridge over its Plymouth branch at Conshohocken, Pa.

SOUTHERN PACIFIC.—This company is reported to be calling for bids for the construction of a nine-mile extension from Union Terminal, Dallas, Tex., to Metzger.

SOUTHERN PACIFIC.—This company has been ordered by the Public Service Commission of Oregon to construct a freight station at Oregon City, Ore. The construction of the station is to be undertaken at once.

ST. LOUIS-SAN FRANCISCO.—This company plans the construction of a freight and passenger station at Neodesha, Kan., to cost \$50,000.

Railway Financial News

CANADIAN NATIONAL.—*Bond Issue Sold.*—The Canadian syndicate, which was awarded the \$50,000,000 30-year 5 per cent guaranteed bonds, has sold the entire issue at 99½ and interest to yield about 5.03 per cent.

CENTRAL GEORGIA.—*New Director.*—C. T. Airey, vice-president and traffic manager, has been elected a director to succeed W. A. Winburn, deceased.

CHICAGO & WESTERN INDIANA.—*Authorized to Issue Bonds.*—The Interstate Commerce Commission has authorized an issue of \$251,000 of consolidated mortgage bonds to be issued to tenant companies in payment of advances.

CINCINNATI SOUTHERN.—*Bonds Offered.*—The Fifth-Third National Bank of Cincinnati and the Guaranty Company of New York have been awarded at a price of \$413,708, \$400,000 4½ per cent Cincinnati municipal bonds, maturing July 1, 1965, issued for the Cincinnati Southern Railroad, which is owned by the city of Cincinnati and leased to the Cincinnati, New Orleans & Texas Pacific. The Guaranty Company is offering these bonds at a price to yield 4.25 per cent.

DELAWARE, LACKAWANNA & WESTERN.—*To Consider Lease.*—A special meeting of the stockholders will be held on February 26 to act on the recommendations of the directors to enter into a perpetual lease with the Sussex Railroad. The operation of this 31-mile line already is controlled by the Lackawanna through the ownership of 94 per cent of the stock. The proposal to lease the Sussex has been approved by the Interstate Commerce Commission and by the Public Utility Commission of New Jersey.

DENVER & RIO GRANDE WESTERN.—*Receivers' Certificates.*—The receiver has applied to the Interstate Commerce Commission for authority to issue \$1,500,000 of 6 per cent receivers' certificates payable December 1, 1924.

DENVER & RIO GRANDE WESTERN.—*Rehearing on Reorganization Plan.*—A rehearing on the reorganization plan which was recently authorized by the Interstate Commerce Commission has been held before Director Mahaffie of the commission's Bureau of Finance on petition of the state authorities of Colorado, who are asking the commission to reopen the case.

EVANSVILLE, INDIANAPOLIS & TERRE HAUTE.—*Authorized to Acquire Line.*—This company has been authorized by the Interstate Commerce Commission to acquire and operate a line of 6 miles in Gibson and Pike counties, Ind.

GAINESVILLE & NORTHWESTERN.—*Permanent Receiver.*—J. D. Patterson has been appointed permanent receiver.

INTERNATIONAL-GREAT NORTHERN.—*N. O. T. & M. Purchase Offer.*—Negotiations for the sale of this road to the New Orleans, Texas & Mexico have reached an advanced stage. The entire capital stock of the International-Great Northern is held in a voting trust. It amounts to \$7,500,000 of stock. The terms of the sale have not been made public, although it is understood that the purchase price is in excess of the \$27.50 a share offered by the St. Louis-San Francisco last year.

KAHULUI (Hawaii).—*Authorized to Issue Stock Dividend.*—This company has been authorized by the Interstate Commerce Commission to issue \$600,000 of common stock as a stock dividend.

LAKE SUPERIOR & ISHPERING RAILROAD.—*Authorized to Consolidate.*—This company has been authorized by the Interstate Commerce Commission to issue \$1,500,000 of stock, to exchange 10,000 shares for a like number of shares of the Lake Superior & Ishpeming Railway and 4,280 shares for 18,700 shares of the Munsing, Marquette & Southeastern and to acquire and operate the properties of the two companies. The properties have heretofore been operated as one system.

NEW ORLEANS, TEXAS & MEXICO.—*Acquisition of I.-G. N.*—See International-Great Northern.

NEW YORK, NEW HAVEN & HARTFORD.—Equipment Notes Authorized.—This company has been authorized by the Interstate Commerce Commission to issue \$1,043,000 of equipment notes in connection with the procurement of 12 electric locomotives from the Westinghouse Electric & Manufacturing Company.

OLD COLONY.—Authorized to Issue Bonds.—This company has been authorized by the Interstate Commerce Commission to issue \$3,500,000 of first mortgage bonds to be sold at not less than 95, of which \$3,000,000 are to be used for the payment of maturing bonds and the balance for additions and betterments.

PENNSYLVANIA.—Death of Director.—Spencer C. Gilbert, a director of this company since April 3, 1922, died at his home in Harrisburg, Pa., on January 24 of heart failure.

RUMFORD FALLS & RANGELEY LAKES.—Asks Authority to Issue Bonds.—This company has applied to the Interstate Commerce Commission for authority to issue \$300,000 of 25-year 6 per cent sinking fund mortgage gold bonds to be guaranteed by the Portland & Rumford Falls and the Maine Central and the proceeds to be used for refunding purposes.

SACRAMENTO VALLEY.—Asks Authority to Suspend Operation Temporarily.—This company has applied to the Interstate Commerce Commission for authority to suspend operation temporarily on its line of 14½ miles while the mine of the Shasta Zinc & Copper Company at Bully Hill, Cal., is not in operation.

SACRAMENTO VALLEY & EASTERN.—Asks Permission to Suspend Operation.—This railway, which operates between Pitt, Cal., and Bully Hill, 15 miles, has petitioned the State Railroad Commission of California for permission to suspend operation.

ST. LOUIS SOUTHWESTERN.—Equipments.—This company has awarded \$1,800,000 one to 15-year 5½ per cent equipment trusts to Harris, Forbes & Co.

SUSSEX RAILROAD.—Proposal to Lease.—See Delaware, Lackawanna & Western.

VIRGINIAN.—Six Months Guaranty Certified.—The Interstate Commerce Commission has certified the amount of this company's guaranty for the six months of 1920 following the period of federal control as \$165,985.

WABASH, CHESTER & WESTERN.—Receivership.—This company passed into the hands of J. Fred Gilster, receiver, on January 4, 1924. Mr. Gilster formerly served as receiver from July 15, 1914, to November 30, 1920, when the first receivership was dissolved. The road operates between Mt. Vernon, Ill., and Menard, 65 miles.

Dividends Declared

Central of New Jersey.—\$2, quarterly, payable February 15 to holders of record February 6.
Green Bay & Western.—Common, 5 per cent, annually; debenture A, 5 per cent, annually; debenture B, ¼ per cent, annually; all payable February 11 to holders of record February 8.
Illinois Central.—Common, \$1.75, quarterly, preferred, \$3, semi-annually; both payable March 1 to holders of record February 8.
Pennsylvania.—75 cents, quarterly, payable February 29 to holders of record February 1.

Trend of Railway Stock and Bond Prices

	Jan. 29	Last Week	Last Year
Average price of 20 representative railway stocks	62.68	61.71	66.32
Average price of 20 representative railway bonds	84.16	83.50	84.54

TEN THOUSAND DOLLARS was the amount of bail required of James Fletcher, 21 years old, a crossing flagman of the Long Island Railroad, arrested on a charge of homicide in connection with the death of several people in an automobile at his crossing on the night of January 27. There are gates at the crossing but they were not closed because of the connections having been frozen; the accounts indicate, however, that Fletcher swung a lantern as a warning to the people in the automobile, which warning was not heeded.

Railway Officers

Executive

J. F. Gilster has been appointed receiver of the Wabash, Chester & Western, with headquarters at Chester, Ill.

C. T. Jaffray, president of the Minneapolis, St. Paul & Sault Ste. Marie, has also been elected president of the Duluth, South Shore & Atlantic, and the Mineral Range, succeeding George R. Huntington, who died on November 3, 1923.

W. H. Ogborn has been appointed receiver for the Detroit, Bay City & Western, succeeding the Detroit Trust Company. Mr. Ogborn will also take over the duties of general manager, succeeding **A. C. McDannel**, who has resigned to devote his entire time to his duties as general manager and treasurer of the Port Huron & Detroit.

Financial, Legal and Accounting

Robert Scott has been appointed director of insurance and safety of the Atlantic Coast Line, with headquarters at Wilmington, N. C.

George Holmes, whose appointment as general counsel of the Central Railroad of New Jersey, with headquarters at 143 Liberty street, New York City, was announced in the *Railway Age*



George Holmes

of January 19, page 266, was born on October 21, 1857, at Ft. Sumter, Charleston, S. C., and was educated at the Glenwood Institute at Matawan, N. J., during the years from 1872 to 1877. He entered railway service in 1884 with the New Jersey & New York railroad, which is now a part of the Erie Railroad and the Central Railroad of New Jersey. From 1909 to June 1, 1916, he was consecutively assistant general counsel of the Central Railroad of New Jersey and general attorney for the same road, which latter position he

was holding at the time of his recent promotion to general counsel of the company.

Operating

T. B. Turner and **J. J. Grosche** have been appointed assistants to the general manager of the Louisville & Nashville, both with headquarters at Louisville, Ky.

M. L. McElheny has been appointed superintendent of the Baltimore & Ohio, New York Terminal Lines, and the Staten Island Rapid Transit Railway, with headquarters at St. George, Staten Island, N. Y., succeeding **E. J. Hamner**, assigned to other duties.

A. J. Hancock, supervisor of transportation of the Southern Pacific, with headquarters at San Francisco, Cal., has been promoted to assistant to the general manager, with the same headquarters. **P. Slater** has been appointed supervisor of wage schedules, with headquarters at San Francisco, a newly created position.

E. B. Taylor, superintendent of the Marietta division of the Pennsylvania, **Otto Schroll**, superintendent of the Wheeling division, and **B. C. Cooper**, superintendent of the Zanes-

ville division, have been assigned to other duties following the consolidation of certain divisions on the Pennsylvania. **D. W. Triem** has been appointed assistant superintendent of the Cleveland & Pittsburgh division, with headquarters at Cambridge, O.

M. L. Gillogly, whose promotion to superintendent of the Southern division of the Northwestern Pacific was reported in the *Railway Age* of January 19, was born on February 2, 1877, at Ogden, Utah. He entered railway service in July, 1907, as right-of-way agent in the engineering department of the Northwestern Pacific and was transferred in January, 1911, to the operating department. In July, 1917, Mr. Gillogly was promoted to industrial agent and held this position until April, 1918, when he was promoted to right-of-way and contract agent. In April, 1920, he was promoted to industrial assistant to the president and general manager and continued in this capacity until his recent promotion to division superintendent.

J. A. Grigware, whose promotion to superintendent of the Port Huron-Grand Rapids division of the Pere Marquette was reported in the *Railway Age* of January 26, was born on September 2, 1881, at Caseville, Mich. He entered railway service in December, 1900, as a freight brakeman on the Pere Marquette and he later served as a locomotive fireman. Mr. Grigware was promoted to cashier and operator at Clare, Mich., in April, 1906, and he held this position until January, 1910, when he was again appointed brakeman. In April, 1912, he was promoted to night chief dispatcher and on August 1, 1914, he was promoted to trainmaster. Mr. Grigware was again appointed chief dispatcher in April, 1920, and in December, 1922, he was promoted to assistant superintendent of the Toledo-Ludington division. He held this position until April 1, 1923, when he was transferred to the Detroit-Canadian division, and he remained in this capacity until his recent promotion to superintendent of the Port Huron-Grand Rapids division.

Henry D. Pollard, whose appointment as general manager of the Central of Georgia, with headquarters at Savannah, Ga., was announced in the *Railway Age* of January 26, page 310, was born on October 4, 1872, at Aylett, Va. He was educated at Aberdeen Academy, Virginia, and took a short course at the University of Virginia. In 1892 he entered railway service as a rodman on construction work with the Baltimore & Ohio and in 1893 he was appointed assistant resident engineer of construction at Wellsville, Ohio, on the Ohio Southern, now a part of the Detroit, Toledo & Ironton. From 1894 to 1898 he was assistant engineer maintenance of way on the Philadelphia division of the Baltimore & Ohio; the following year he served as transitman on the Central of Georgia. In 1900 he was appointed resident engineer of construction, and subsequently served consecutively as supervisor of track, trainmaster, roadmaster and from June, 1905, to 1910, as superintendent at Macon, Ga., on the same road. He was appointed assistant superintendent of the Sorocabana Railway, at Sao Paulo, Brazil, in 1911, and later, was inspector general of the Auxiliare Company at Santa Maria and Porto Alegre, Brazil. In 1913 he returned to the service of the Central of Georgia as valuation engineer and two years later was elected president of the Wrightsville & Tennille, with headquarters at Tennille, Ga. In 1918 he was appointed assistant general manager of the Central of Georgia and a short while thereafter he was promoted to general manager. Two years later he was appointed general superintendent, with headquarters at Savannah, which position he was holding at the time of his recent promotion to general manager, a newly created position.



H. D. Pollard

Mechanical

J. J. Simmons has been appointed acting assistant master mechanic of the Hannibal division of the Chicago, Burlington & Quincy, with headquarters at Hannibal, Mo.

R. G. Henley, master mechanic of the Norfolk & Western, with headquarters at Portsmouth, Ohio, has been promoted to assistant to the superintendent of motive power, with headquarters at Roanoke, Va. **O. F. Hark**, master mechanic with headquarters at Bluefield, W. Va., has been transferred to Portsmouth, succeeding Mr. Henley. **J. L. Barry**, general foreman, with headquarters at Columbus, Ohio, has been promoted to master mechanic, with headquarters at Bluefield, succeeding Mr. Hark.

M. F. Cox, whose promotion to assistant superintendent of machinery of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in the *Railway Age* of January 26, was born in Essex county, Virginia. Mr. Cox was first employed by the American Locomotive Company as a special apprentice where he served for a time in each department, including foundry, machinery and erecting shop, boiler shop and blacksmith shop. He was then assigned to the drafting department, in which he continued until he was promoted to mechanical engineer. He also served at the Richmond Locomotive Works in a similar capacity, entering railway service in 1911 as mechanical engineer of the Louisville & Nashville. Mr. Cox continued in this capacity until his promotion to assistant superintendent of machinery.

B. N. Lewis, whose promotion to mechanical superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Fond du Lac, Wis., was reported in the *Railway Age* of January 26, was born on August 22, 1883, at Austin, Minn. He entered railway service in June, 1901, as a machinist's and draftsman's apprentice on the Minneapolis, St. Paul & Sault Ste. Marie, at Minneapolis, Minn. In July, 1903, he was appointed special apprentice on the Erie at Meadville, Pa., and continued in this position until April, 1906, when he was appointed shop inspector in the Franklin plant of the American Steel Foundries. Mr. Lewis returned to railway service in January, 1908, as a gang foreman on the Erie and in February, 1909, he was appointed roundhouse foreman on the Minneapolis, St. Paul & Sault Ste. Marie. From June, 1911, to May, 1915, Mr. Lewis was engaged in special shop work at Minneapolis and on the latter date was promoted to mechanical valuation engineer. He was promoted to assistant mechanical superintendent in November, 1917, and he held this position until his recent promotion to mechanical superintendent.

Engineering, Maintenance of Way, and Signaling

K. H. Hanger, assistant to the engineer maintenance of way of the Missouri-Kansas-Texas, with headquarters at Dallas, Tex., has been promoted to engineer maintenance of way with the same headquarters, succeeding H. H. Johtz, deceased.

N. B. Pitcairn, superintendent of the Norfolk division of the Pennsylvania, with headquarters at Cape Charles, Va., has been appointed engineer maintenance of way of the Northern division, with headquarters at Buffalo, N. Y. **S. L. Church**, engineer maintenance of way of the Illinois division, with headquarters at Chicago, has been transferred to the Lake division, with headquarters at Cleveland, Ohio, succeeding **F. H. Watts**, who has been assigned to the office of the chief engineer maintenance of way of the Central Region, with headquarters at Pittsburgh, Pa.

Obituary

William J. Crook, a pioneer railroad contractor in the Rocky Mountain region, died recently at the age of 83. Mr. Crook constructed part of the Denver & Rio Grande from Denver, Colo., to Alamosa, and a portion of the line of the El Paso & Southwestern from El Paso, Tex., to Bisbee, Ariz. He also built parts of the first lines of the Atchison, Topeka & Santa Fe and the Denver & Salt Lake in Colorado.